

TECH.SIGHT

Immunoassay Stabilizer

The *Immunoassay Stabilizer* can enhance the long-term stability of many immobilized anti-

PRODUCTS

gens and antibodies. The stabilizer can replace blocking solution because it allows immunoassay plates or membranes to be completely dried without sacrificing the activity of the fully hydrated protein. Some of the advantages of *Immunoassay Stabilizer* are increased sensitivity of the assay, potential lower cost per test due to decreased antigen use, increased shelf life, and elimination of the need for blocking solution. It can be used for proteins and monoclonal antibodies. By replacing the water as the protein is dried, *Immunoassay Stabilizer* allows the protein to retain much of its fully hydrated structure and function. **Advanced Biotechnologies.** For information call 800-426-0764 or circle 142 on the Reader Service Card.

Prostaglandins for Signal Transduction Research

A large number of prostaglandins for use in signal transduction research includes the prostaglandins A₁, A₂, B₁, B₂, D₂, E₁, E₂, F_{1α}, F_{2α}, I₂, and J₂, and their methyl esters. Also available are intermediates for prostaglandin syntheses and bioactive lipids. **Sigma.** For information call 800-282-1298 or circle 143 on the Reader Service Card.

Gel-Pro Analyzer Software

Gel-Pro Analyzer automates gel reading to improve throughput, minimize ambiguity, standardize laboratory procedure, and increase reproducibility. Gel-Pro Analyzer groups its functions according to actual laboratory procedure, making it intuitive and easy to learn. Groupings include quantitative polymerase chain reaction (PCR); differential display PCR; restriction fragment length polymorphism technology; and Northern (RNA), Southern (DNA), and protein immunoblot analysis. Available in Windows- or Macintosh-based form, the software combines point-and-click simplicity with the ability to integrate text, data, and graphics. Built-in functions allow the user to automate routine procedures, record sessions, and play them back. **FOTODYNE.** For information call 800-362-3686 or circle 144 on the Reader Service Card.

Mutation Detection and DNA Typing Kit

The BESS MutaScan Mutation Detection and Localization Kit allows scanning and

characterization of 100% of all single-base changes, insertions, deletions, frameshifts, and repeat expansions in amplified DNA. The new product combines the T-ladder scanning capabilities of the BESS T-Scan kit with the G-ladder scanning technology of the BESS G-Tracker kit (both of which are simpler than sequencing). Characterization of any DNA sequence changes on multiple samples can be accomplished in as little as one day, using a procedure that does not require special gels or gel electrophoresis conditions, hazardous reagents, reannealing steps, or extensive reaction optimization. **Epicentre Technologies.** For information call 800-284-8474 or circle 145 on the Reader Service Card.

Imaging Densitometer

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transparency scanning abilities as well as transmittance and reflectance modes to suit many kinds of samples. Analysis functions include molecular weight and retardation factor calculations, one-dimensional multilane and two-dimensional spot densitometry, dot blot analysis, object distance measurements, and gel scoring. **Alpha Innotech.** For information call 800-795-5556 or circle 146 on the Reader Service Card.

Mouse Embryonic Stem Cell Reagents

A line of products released under the name ES-Cult is for the in vitro maintenance and hematopoietic differentiation of mouse embryonic stem (ES) cells. Two-step in vitro differentiation of ES cells in methylcellulose-based media is being employed increasingly as an alternative to the generation of chimeric and knockout mice for gene func-

tion studies, particularly when the knockouts result in embryonic lethality. ES-Cult products include sera, liquid and methylcellulose-based media, supplements, and accessories. **StemCell Technologies.** For information call 800-667-0322 or circle 147 on the Reader Service Card.

Human Cancer cDNA Expression Array

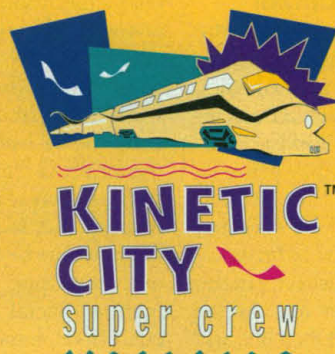
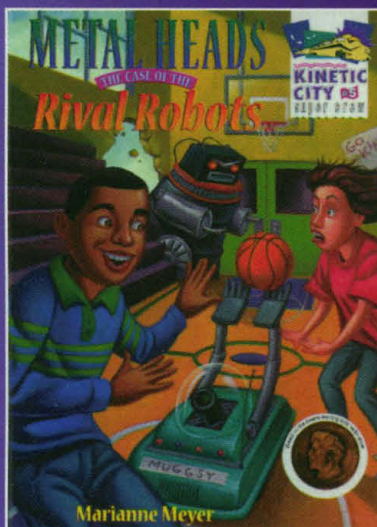
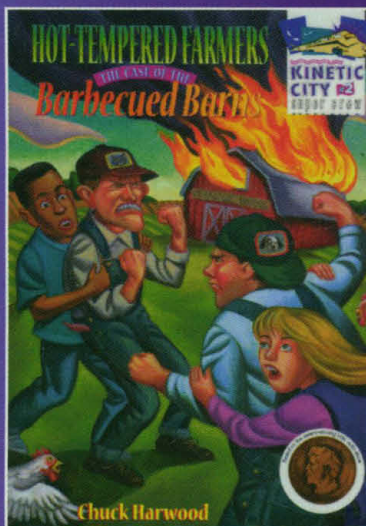
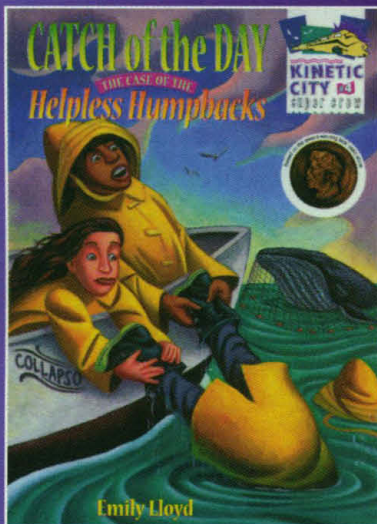
The Atlas Human Cancer cDNA Expression Array includes 588 well-characterized, cancer-related genes for analyzing differential gene expression. The array allows the researcher to investigate major pathways associated with cancer, monitor cellular responses to therapeutic compounds, identify diagnostic markers, compare closely related tumors, and analyze critical stages of tumor development. The cDNA fragments are carefully selected and sequenced to deliver highly informative and accurate hybridization. Each array is shipped with a patent-pending, gene-specific primer mix used for generating the hybridization probe. This primer mix enhances probe specificity, allowing the researcher to use total RNA when polyadenylated RNA is not available. **CLONTECH Laboratories.** For information call 800-662-2566 or circle 148 on the Reader Service Card.

Literature

Differential Refractive Index Detector: IOTA 2 is a brochure on a universal nondestructive detector for high-performance liquid chromatography (HPLC). *High Sensitive Electrochemical Detector: MODEL 105* is a brochure on a selective and sensitive HPLC detector for routine and automatic applications. **Precision Instruments.** For information call (33) 4 91 06 75 77 or circle 149 on the Reader Service Card.

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POSITIONS OPEN



DIRECTOR GRADUATE PROGRAMS IN BIOMEDICAL SCIENCE Saint Louis University Medical School

Saint Louis University, a Catholic Jesuit Institution dedicated to education, research, and health care, is seeking applicants for a full-time Director for a new interdisciplinary graduate studies program in biomedical sciences at Saint Louis University Medical School. Beginning in 1998, admission to all Ph.D. graduate programs in the medical school will be through the Graduate Programs in Biomedical Science. This program is designed to provide graduate students with a strong foundation in all biomedical sciences during the first year of graduate training. The Director, with an Administrative Assistant, will be responsible for managing student recruiting and admissions, implementing first-year courses, administering the budget, maintaining program records, and will also serve as advisor and liaison for first-year graduate students and oversight committees. The Director will be a member of the Dean's staff of the School of Medicine, and have responsibilities to the Executive, Curriculum, and Admission Committees of the program.

Candidates for this position should have a Ph.D. in one of the biomedical sciences, previous experience in research and in graduate student training, and administrative expertise. The position requires skills in communication and interpersonal relationships, as well as organizational and supervisory skills.

Applicants should submit a letter of interest, detailed curriculum vitae including description of relevant experience, and three letters of recommendation to:

Dr. Thomas Westfall
Chairman of the Search Committee
Graduate Programs in Biomedical Sciences
Department of Pharmacological and
Physiological Science
Saint Louis University School of Medicine
1402 South Grand Boulevard
St. Louis, MO 63104-1004

To learn more about Saint Louis University School of Medicine graduate training in the biomedical sciences, visit our **website:** <http://www.slu.edu/colleges/med/>.

Saint Louis University is an Affirmative Action/Equal Opportunity Employer.

TENURE-TRACK ASSISTANT PROFESSOR POSITION IN STRUCTURAL BIOLOGY

The Department of Biochemistry and the University of Kentucky Center for Structural Biology are soliciting applications for an individual utilizing physical (particularly crystallography or protein engineering), chemical, biochemical, and/or recombinant DNA approaches to study molecular mechanisms in biological systems. The successful candidate will join an existing group of faculty with expertise in high-field NMR and X-ray crystallography as well as theoretical approaches to protein folding and structure. Applicants should send a letter of intent, curriculum vitae, a brief description of their research plan, and three letters of recommendation. All materials should be addressed to: **Structural Biology Search Committee, Department of Biochemistry, University of Kentucky, 800 Rose Street, Lexington, KY 40536-0298.** *The University of Kentucky is an Equal Opportunity Employer and encourages applications from qualified women and minorities.*

RESEARCH ASSISTANT PROFESSOR. Cardiology and molecular medicine, Oregon Health Sciences University. Biomedical Scientist sought for open-ended opportunity in NIH-funded cardiac molecular biology laboratory, focused on mechanisms of cardiac myocyte growth, emphasizing tyrosine kinase signaling pathways. Successful applicant will assist in developing and characterizing murine transgenic lines that utilize tetracycline transactivator systems. Required: Ph.D. and postdoctoral training in molecular/cellular biology, relevant experience and publications. Send curriculum vitae and names and telephone numbers of three references to: **R. E. Hersberger, M.D., Card-UHN-62, 3181 S.W. Sam Jackson Park Road, Portland, OR 97201. FAX: 503-494-5049.**

POSITIONS OPEN

FACULTY POSITION EAST CAROLINA UNIVERSITY SCHOOL OF MEDICINE Department of Physiology

The Department of Physiology invites applications for a tenure-track position at the **ASSISTANT PROFESSOR** level. Applicants should have a Ph.D. and/or M.D., relevant postdoctoral experience, a strong research background using state-of-the-art cellular and molecular methods. In particular, outstanding, highly motivated individuals with research experience in cell signaling who complement Departmental interests in inflammatory responses, regulation of cell growth, ion channel physiology, cardiovascular physiology, or angiogenesis are encouraged to apply. The successful applicant will have demonstrated potential to develop and sustain an externally funded research program, and will be expected to participate in the Departmental teaching program for graduate students, medical students, and allied health professionals. Together with other basic sciences departments in the medical school, the Department of Physiology functions in a fertile research environment, and participates in several interdisciplinary initiatives including the Bioenergetics Program, the Biophysics Program, the Neurosciences Program, the Diabetes Center, and the Cardiovascular Center. A competitive start-up package will be available.

Review of applications will begin in May 1998; the search will continue until the position is filled. Applicants should send a curriculum vitae, along with a summary of research interests and goals, and the names of at least three references who have agreed to submit letters of reference to: **Robert M. Lust, Ph.D., Chairman, Department of Physiology, East Carolina University School of Medicine, Brody Medical Sciences Building, Room 6N98, Greenville, NC 27858-4354.**

East Carolina University is a member of the University of North Carolina System and is an Equal Opportunity/Affirmative Action Employer.

SENIOR FACULTY POSITION BIOMATHEMATICS IN NEUROSCIENCES/ PHYSIOLOGY

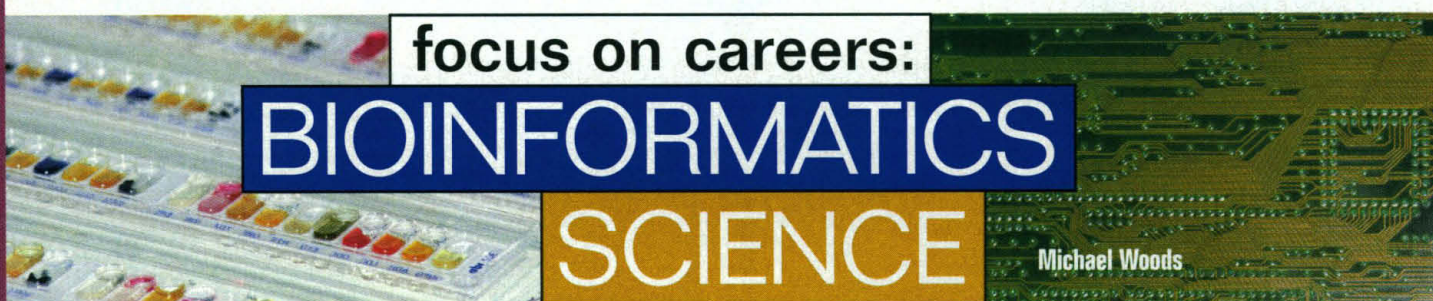
UCLA's Department of Biomathematics solicits applications for a **PROFESSORIAL** position from Mathematical Biologists who have substantial research interest in the neurosciences or physiology, and in developing and using innovative mathematical/computational methods to advance research in these areas. Recruitment of a senior tenured faculty member has been authorized, though consideration also will be given to exceptionally qualified faculty at all levels. The department and its graduate program are committed to biologically realistic modeling and analysis, and hence, strength in applied mathematics that enables research at biologically meaningful levels of complexity is valued.

Versatility in research interests and skills also is highly regarded. UCLA provides a rich environment for scientific interactions with neuroscience and physiology investigators whose interests range from the molecular to the systems level. Preferred receipt date for applications is July 15, 1998. Send curriculum vitae, a short statement of teaching and research interests, list of publications, and names and addresses of three people familiar with your work to:

**Biomathematical Neurosciences/
Physiology Search Committee
Department of Biomathematics
UCLA School of Medicine
Box 951766
Los Angeles, CA 90095-1766**

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Exposure assessment **FACULTY POSITION.** Full-time faculty position in exposure assessment at the **ASSISTANT** or **ASSOCIATE PROFESSOR** level. Applicants must possess a Doctoral degree in an appropriate subspecialty of public health, engineering, or chemistry, but with a demonstrated professional commitment and competence in human exposure assessment. Candidate should have demonstrated experience in research. Responsibilities include developing an extramurally funded research program in exposure assessment and teaching. Send curriculum vitae and the names of five references to: **Marc B. Schenker, M.D., M.P.H., Chair, Department of Epidemiology and Preventive Medicine, TB-168, One Shields Avenue, University of California, Davis, CA 95616-8638.** The position will be open until filled but not later than December 31, 1998. *The University of California is an Equal Opportunity/Affirmative Action Employer.*



BIOINFORMATICS: BREAKING INTO A HOT CAREER FIELD

Bioinformatics, the use of computer technology to manage biological information, made its spectacular debut a few years ago, as the first trickles of gene sequence information from the Human Genome Program (HGP) and other sequencing projects grew into a deluge. Individuals with the skills to work on the interface between molecular biology and computer science instantly became some of the most sought-after job applicants in the biopharma world. With about 3 billion base pairs on its agenda, and a target completion date of 2005, HGP alone should foster a continuing explosion of data and a robust job market for computational biologists.

"Career opportunities in bioinformatics are very, very good," said John M. Greene, senior staff scientist, bioinformatics research, at Gene Logic Inc., Gaithersburg, Maryland. "It seems that every time you turn around a company has decided to set up a bioinformatics group, or expand an existing group. Many scientists are turning their careers in this direction."

But Greene notes that breaking into the field may not be as simple as all the talk about a feeding frenzy for personnel suggests. He cites the common misperception that a person can take a course in C, the programming language, acquire some database knowledge, and be deluged with high-paying job offers. Salaries around the six-figure mark are possible in bioinformatics, but getting them or even an entry-level position requires more planning than was common in the past.

Not many of today's bioinformatics people planned it. Many started out doing something else, entered the field before it had a name, and learned key skills on the job. Some were computer scientists who learned biology. Others were life scientists who learned computing.

After getting a Ph.D. in genetics from Harvard University, Greene did a postdoc, and worked for almost a year at a start-up antisense company. His career path led to Human Genome Sciences (HGS) and a job that involved substantial Basic Local Alignment Search Tool (BLAST) analysis on expressed sequence tags (ESTs) to identify genes with possible medical applications. BLAST programs are basic tools for searching DNA and protein databases for sequence similarities. Greene liked the work and finally switched into bioinformatics full time at HGS. He recently moved up to Gene Logic, which offers pharmaceutical companies technology to speed up development of drug targets. Gene Logic has a proprietary technology that identifies changes in gene expression associated with disease. It is developing a flow-through DNA chip to gauge drug efficacy and toxicity by analyzing gene changes, and an object-oriented database of gene expression patterns to identify new drug targets.

Strongest demand today exists for individuals with degrees in the life sciences and computer sciences, and multiple years of programming and database development experience, Greene says. Typical combinations include a Ph.D. in molecular biology, cell biology, or biochemistry and a B.S. in computer sciences. Life science Ph.D's, largely self-taught in key computer skills, with industry experience, have good opportunities. People who emerge from the few doctoral programs in bioinformatics also will be "incredibly marketable," especially those with industry experience. This range of individuals, very difficult to find, often wind up heading bioinformatics departments or programs.

At the staff scientist and senior staff scientist levels, biopharma companies now tend to place emphasis on applicants with computer science skills. That's largely because databases and search tools are still being developed. Greene thinks that emphasis will shift in a few years to interpreting information in databases. Companies will then look for individuals who first and foremost are biologists but have key computational skills.



John M. Greene, Ph.D.

What are those skills? Greene's list includes knowledge of UNIX, the operating system used for many computational biology programs; a good grasp of the concept of relational databases, which are the heart of bioinformatics; and skill with Structured Query Language (SQL), a language used to query databases. In the future, knowledge of object-oriented databases may be increasingly important. Programming skills also are essential. Skills with C, the programming language, will help individuals learn Perl, the scripting language widely used in bioinformatics. Object-oriented languages, such as Java, will be increasingly important. Expert knowledge of sequence-analysis programs like BLAST and FASTA is critical. Web skills, of course, are necessary, including the ability to write some Hypertext Markup Language (HTML).

What gives one applicant an edge over another? Recruiters get excited over applicants who have applied computational biology skills in a practical way. The individual who wrote a program, for instance, and used it in thesis or postdoctoral work, might have an advantage over a similar individual who just took programming courses.

"For individuals who thrill at being on the cutting edge of science, with the skills to excel in two very different worlds, bioinformatics can be an extraordinarily good career," Greene said. "For me, the switch was the best step I've taken in the last decade." ■

Michael Woods writes frequently on the biotechnology and pharmaceutical industries.

Astra

Bioinformatics Scientists

Working in close collaboration with laboratory scientists, you will use your strong record of success in computational applications in the biological sciences, and your broad understanding of computer technology, to identify novel therapeutic targets. Specific activities will include evaluating new algorithms, implementing new computational tools, and database mining. A Ph.D. in Biology or Computer Science and a minimum of 5 years' relevant experience are required.

Cheminformatics Scientists

In this key position, you will use your strong background in computational applications in chemistry and pharmaceutical discovery to identify, develop, and implement computer systems to support the drug identification and refinement process. A Ph.D. in Chemistry, Biology or Computer Science and a minimum of 5 years' relevant experience, are required.

Research Informatics Programmers

The ideal candidate will bring a strong record of success in designing, developing, and integrating computer systems in a research environment. Experience in bioinformatics and/or cheminformatics preferable; a BS/MS in Computer Science is required. Entry level and senior level positions available.

Bioinformatics Center

As an influential international presence in the research and development of pharmaceuticals and novel therapies, Astra continues to expand its leadership position. We have focused our efforts and increased our commitment to the biotechnology arena in an effort to bring to market therapies that improve human health and the quality of life. With over \$5 billion in sales and more than 22,000 employees worldwide, we are currently directing our attention to a variety of key treatment areas — from gastrointestinal, respiratory, and cardiovascular diseases, to pain control, diseases of the central nervous system, and anti-infectives.

To enhance our performance and ensure optimal results, we are making major, ongoing investments in biotechnology and genomics as part of our biotechnology strategy. The result has been significant development in areas such as bioinformatics, structural biology/chemistry, cheminformatics, high throughput compound screening, biotech protein production, and transgenic animal models. The philosophy behind our strong forward momentum is to integrate the newest technologies into our research in order to ensure long-term, in-house knowledge and expertise in these areas, enhancing our capacity to import exciting new technological advances and critically manage ongoing research and business collaborations.

Astra Bioinformatics Center, now located in Cambridge, MA, is rapidly expanding, providing accelerated and enhanced information transfer to our Astra colleagues throughout the world. The project has an increasingly important role in supporting our search for new therapeutic targets, drug screening, and genetic understanding.

Astra Bioinformatics Center offers excellent opportunities for professionals to shape the future of this key resource for pharmaceutical discovery. You will play an influential role in directing our focus and growth, and have the resources of a global pharmaceutical leader behind you. The work you do will facilitate research and development projects at Astra facilities throughout the world while providing major contributions to the global knowledge base. Further, **Astra Bioinformatics Center** will be located on a research campus in the greater Boston area in the year 2000.

For professionals who are serious about their careers and about their contributions, Astra offers you the tools and the opportunities to exercise your expertise in a role that will shape the future...yours and ours.

Qualified candidates, please send your C.V., indicating appropriate position, to: **Astra Research Center Boston, Human Resources, 128 Sidney Street, Cambridge, MA 02139; FAX: (617) 576-4668 or e-mail at: hr@arcb.us.astra.com.**

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ASTRA

Astra Research Center Boston

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Exciting Opportunities In Bioinformatics For CNS Drug Discovery

Astra, an international pharmaceutical company in a phase of rapid growth, currently employs over 22,000 people involved in all phases of research, production and marketing of pharmaceuticals. Sales in 1997 were \$5.65 billion worldwide.

As one of 5 R & D companies within the Astra Group, Astra Arcus is focused on the Discovery and Development of drugs for the treatment of central nervous system diseases. In an effort to further expand our research activities, we are building a Boston-based, state-of-the-art research center for 250 staff to be completed in 2001. In the interim, we are able to offer several exciting opportunities within the Molecular Sciences Department to work at our newly-renovated facility at the Massachusetts Biotechnology Park in Worcester. These positions are exceptional opportunities for ambitious scientists to work with highly qualified experts using advanced technologies in a multidisciplinary environment.

SECTION HEAD

RESEARCH ASSOCIATE

SENIOR RESEARCH SCIENTIST

The Bioinformatics Section Head will be responsible for developing the infrastructure, databases, and tools to identify and validate new therapeutic targets for CNS drug discovery. In addition to a Ph.D. with several years of training and experience in Bioinformatics, this position requires an individual with skills in scientific leadership and management. The Senior Research Scientist and the Research Associate will be involved in coordinating the use of Incyte databases and technology for CNS research, as well as the construction of in-house databases and tools for research involving genomics, proteomics, and gene-chip technology. They will also provide support in database-mining, sequence analysis, and gene informatics for strategic and exploratory research projects. Applicants for these positions should have training in Bioinformatics or a related field, with experience in state-of-the-art techniques in database development and analysis. Senior Research Scientists should have a Ph.D. with three to five years' post doctoral experience in a relevant field. Research Associates should have either a BS or an MS degree with two or more years of relevant experience. Preference will be given to candidates with experience in neuroscience or with knowledge of diseases of aging and dementia, movement disorders or stroke.

We offer a highly competitive compensation/benefits plan and managed relocation assistance. Please forward your resume, including salary history and references to: Dr. Davis Ellis at Astra Arcus USA, Inc., Human Resources Department, Three Biotech, One Innovation Drive, Worcester, MA 01605 or Euromedica plc, 8 Enterprise House, Vision Park, Histon, Cambridge, CB44ZR UK; phone: 44 1223 235 333; Fax: 44 1223 235 305 or E-mail at David_Ellis@Euromedica.com.



EUROPEAN OPPORTUNITIES

Bioinformatics

In our central research division in Leverkusen a job opportunity has arisen for a research scientist in the field of Bioinformatics.

Our profile

Bayer is a globally active, research-based company in the fields of chemical and life sciences, headquartered in Leverkusen/Germany with recognized research centers in Germany, the USA, and Japan. With total annual sales of DM 55 billion and an annual R&D budget of DM 4 billion in 1997, we can offer a very attractive working environment for highly motivated people. (For more details refer to <http://www.bayer.com>).

Your task

You will be working in the area of functional genomics and pharmacogenomics. In a young and dynamic team you will establish close collaboration with molecular biologists, computational and medicinal chemists, informaticists, and external cooperation partners in the fields of bioinformatics and genomics.

Your profile

As a research scientist with a Ph.D. in Biological or Computer Science you have gained significant professional expertise in some of the following areas:

- Computer-aided sequence analysis of proteins and genes
- Metabolic pathway analysis
- Visualization of genomic information
- genome comparison
- Utility programming in a UNIX environment

You have a profound knowledge of relevant software and databases, excellent communication skills, and enjoy working in a multidisciplinary team. For further information, please contact **Dr. Gabi Seidel, Bayer AG, ZF-BTM, e-mail: gabi.seidel.gs@bayer-ag.de**.

Your application

If your background and personal experience fits to this profile, please send your complete application (including a CV, a brief description of research experience, a list of publications, names of referees) and ref. No. 518 to:

Bayer AG
Personalmarketing
Frau Redmer
Hauptstrasse 119
51368 Leverkusen
Germany



The quest for success begins with the best

DuPont is a world leader in research in the chemical and biological sciences, including fundamental and applied research programs ranging from industrial bioprocesses for the synthesis of chemicals and materials to genetically improved crops and discovery of crop protection chemicals. We are now seeking Ph.D. Principal Investigators, as well as M.S. and B.S. support staff to join multidisciplinary teams of Life Scientists.

POSITIONS IN COMPUTATIONAL BIOLOGY

We are a group of computer scientists, engineers and experimentalists using computer-based/analytical approaches to problems that arise from the complexity and overabundance of biological data. New technologies in Genomics and Functional Genomics for gathering biological information have made it reasonable to expect complete inventories of molecular components like genes, RNAs, and proteins in cells. But we still won't be able to predict biological behavior. How will we organize and understand this information to make it useful? We need new insights, new science, and technology to illuminate the landscape being created by research. We are looking for Systems Engineers, Computer scientists and computational biologists to help develop new computational tools and analytical models to extract information from the data. Creativity and the ability to work with colleagues from different disciplines are as important as specific, strong technical credentials.

Biochemical Systems Engineer

This position requires metabolic pathway analysis using approaches such as MCA, flux analysis, modeling and simulation, and continuous, discrete, and numerical optimization as part of a team approach. Candidates should be interested in connecting these analytical tools to genomic and functional genomic-type data collection (e.g. gene expression profiles, protein profiles, metabolites, etc.). The successful candidate will likely have a Ph.D. in Chemical Engineering with strong credentials in biochemical engineering and/or biology, or some equivalent mix of education and experience. **Please refer to CRD98-2100**

Systems Scientist

This position requires experience in approaching problems with a "process systems perspective". Appropriate backgrounds might include process control engineering, dynamic systems and simulation, probability and stochastic processes, decision analysis, dynamic programming, and planning under uncertainty, use of logical and mathematical models to provide insight and solutions to complex problems, large-scale data analysis and biological systems analysis. Informatics (bioinformatics) sophistication will be a plus, but not required, although interest in developing tools in this area and working with this kind of data will be required. Candidates should have a Ph.D. and experience in some area of process systems engineering, computer science, or dynamical systems or related areas of applied mathematics. **Please refer to CRD98-2123A**

Computational Biologist

This position requires strong experience in modeling biological systems. Ability to work with biologists and mine the biological literature to build models. Experience in biological neural networks or computational neurobiology, for example, would be appropriate, as is demonstrated ability to create models in systems where only partial data is available. Interest in using modeling/simulation as an aid in developing system understanding and for making predictions leading from the understanding. Candidates should have a Ph.D. and both computational and biological credentials. Familiarity with bioinformatics and bioinformatic resources will be a plus. **Please refer to CRD98-2123B**

MICROBIAL AND INDUSTRIAL BIOTECHNOLOGY

The Microbial and Industrial Biotechnology Group at the Experimental Station, the central research campus at DuPont in Wilmington, Delaware, is opening several positions for computational biologists/computer scientists in the newly started program of Microbial Genomics. This program will cover both Computational and Experimental Genomics. It is designed around three interrelated projects: the complete sequencing, assembly and annotation of microbial genomes of industrial importance, the creation of functional databases, and the application of genome-wide experimental approaches. The genomics group will interface with a first rate scientific community that fosters interaction between microbiologists, biochemists, chemists, and engineers. The Experimental Station also provides remarkable scientific support services.

Bioinformatics Specialist

Candidates should have a Ph.D. in Computer Sciences or Bioinformatics with a minimum of 2 years experience in developing systems for the analysis of genomic data. Experience in the area of developing and improving specialty algorithms for the assembly, gap closure, analysis and annotation of microbial genomes is highly desirable. Proficiency in C, C++, PostScript, SQL and shell scripting is desired. Familiarity with at least one of the following languages is required: Java, Perl, LISP, Pascal and FORTRAN. Also, familiarity with microbial molecular biology and understanding of metabolic pathway reconstruction is a plus. **Please refer to CRD98-2123C**

Java Developer

Candidates should have a M.S. in Computer Sciences or Bioinformatics or a M.S. in Molecular Biology with either thesis work in bioinformatics or extensive experience in data representation of biological data. A minimum of 2 years experience in biological data representation that includes developing/implementing representation tools for genomic data, including a genome viewer and representation of protein and metabolic pathways is required. Candidates should have extensive experience with Java and proficiency in SQL, familiarity with microbial molecular biology, and at least one of the following languages: Perl, LISP, Pascal, FORTRAN and COBOL. **Please refer to CRD98-2115**

Database Specialist

Candidates should have a B.S. or M.S. in Computer Sciences or Bioinformatics or an M.S. in Molecular Biology with either thesis work in bioinformatics or extensive experience in bioinformatics. A minimum of 4 years experience in creating, maintaining, propagating and updating relational and object oriented databases in Oracle and/or Sybase is required. Familiarity with developing biological databases and algorithms with direct application to microbial genomes, and proficiency in at least one of the following languages is required: C, C++, Java, Perl, LISP and Pascal. **Please refer to CRD98-2126**

Whether you are just starting your career or looking for growth opportunities, we encourage you to apply. We are looking for highly motivated individuals who can become members of our research teams to enhance both our success as well as their own. You will enjoy our state-of-the-art facilities. These positions offer a highly competitive salary and an excellent benefits package. We are located in Wilmington, DE, an area that offers an attractive lifestyle with easy access to all the cultural, academic and recreational activities on the Eastern Seaboard. Qualified candidates should send a resume and three references to: **DuPont Human Resources, CRD98#, 1007 Market Street, N12419, Wilmington, DE 19898 or FAX 1-800-631-2206.** We are an equal opportunity employer. Please make reference to the job code when responding.



THE LEADER IN BIOINFORMATICS CONTINUES TO SET THE PACE.

Anyone with a finger on the pulse of the pharmaceuticals industry knows that Bioinformatics is the conduit to the future of the industry. And no company is as well versed in this area as **SmithKline Beecham**.

Like many companies, we're using it to provide tools, data and services to bench scientists and strategic alliance partners. But we're not limiting Bioinformatics to these areas. Instead, we're expanding its role and using it to make fundamental new contributions to our business.

The future of pharmaceuticals runs through Bioinformatics and as such, our commitment to this area is long-term. We're assembling a critical mass of the best and brightest in this emerging field and making an unprecedented range of data resources available to them.

Career opportunities in Bioinformatics at SmithKline Beecham range from support roles, to key programming positions, to basic research resulting in novel patents and publications. We are presently seeking dedicated individuals to fill the following positions:

BIOINFORMATICS SOFTWARE ENGINEERS

**Production Software Systems
Systems Administration
Sequencing Informatics
Project Leader for Database Group**

GENE EXPRESSION ANALYSIS, MATHEMATICAL BIOLOGY

This position will be responsible for coordinating and conducting research in sophisticated algorithms for discovering patterns in expression data and in modeling kinetic phenomena.

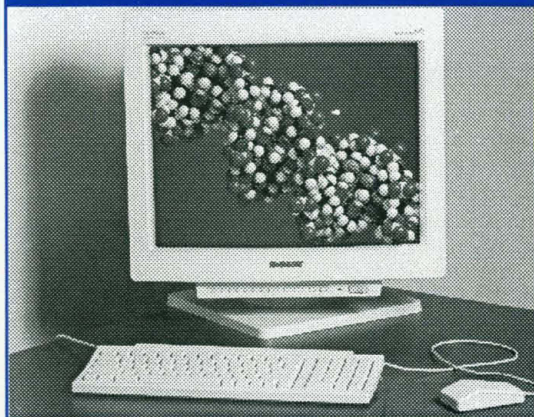
Here is your chance to make drug discovery history. Located in a state-of-the-art research facility in suburban Philadelphia, SmithKline Beecham offers a competitive compensation/benefits/relocation package plus a stimulating work environment in which to grow and excel. For confidential consideration, please forward resume and salary requirements to: SmithKline Beecham Pharmaceuticals, Job Code A8BIOINF, P.O. Box 2645, Bala Cynwyd, PA 19004. **Indicating Job Code is essential.** For more information on SmithKline Beecham, visit our Web site at www.sb.com/careers. We are an Equal Opportunity Employer, M/F/D/V.



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BIOINFORMATICS



SCIENTISTS Bridgewater, NJ

Hoechst Marion Roussel, a world leader in pharmaceutical based healthcare, is dedicated to extending and enhancing human life through discovery, development and manufacture of innovative products. Additional dedicated resources have created career opportunities within our expanding U.S. Strategic Research Center in Bridgewater, N.J.

Responsibilities include conception, design and performance of bioinformatics experiments and methodologies to assist in discovering new therapeutic approaches; participation in reviews and planning of further experimentation; guiding/assisting internal and external biotechnology staff in experiment design and analysis and keeping abreast of the evolving technologies in this field. These positions require direct interaction with the global director of Bioinformatics.

Ph.D. in Bioinformatics, Computational Biology, Molecular Biology or related field required. Experience in evaluating and implementing novel algorithms for DNA, genomic and protein function analysis preferred as are skills in statistical methods/analysis and differential gene expression studies. Software and database development and integration skills and essential knowledge of UNIX computing environment necessary.

Attracting and retaining top talent is a high priority at Hoechst Marion Roussel. That is why we offer one of the most outstanding and comprehensive compensation and benefits packages in the pharmaceutical industry. Our total rewards package includes competitive compensation and bonus programs, flexible medical and dental plans, tuition assistance, income protection plans, and generous retirement plans that have been cited as the best in the industry. For consideration, mail your resume (suitable for scanning) including salary history/requirements, to: **Staffing Manager, D-103H, Ref #1998BW0014, Hoechst Marion Roussel, Routes 202-206, P.O. Box 6800, Bridgewater, New Jersey 08807-0800, U.S.A., or e-mail: jobs@hmri.com.** For additional company information, we invite you to visit our website: www.hmri.com. An affirmative action employer M/F/D/V.

Hoechst Marion Roussel

Hoechst

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Where INNOVATION RULES

Innovation is priority one at Millennium. Always has been. Always will be.

That's because we knew that our distinctly different approach combining genetics, genomics, and bioinformatics would create a uniquely powerful discovery process. And we realized that our strategic partnerships with major pharmaceutical companies would accelerate discovery and development - making breakthrough therapies available faster for such major under-served diseases as obesity, cancer, cardiovascular diseases, and many more.

Today, the innovation and excitement continues with the creation of three new subsidiaries - Millennium BioTherapeutics, Millennium Predictive Medicine, and Millennium Information, Inc. - designed specifically to enhance the discovery process in their specialized areas. We have also entered into a unique agreement with the Monsanto Company to create Cereon Genomics L.L.C. - a wholly owned Monsanto subsidiary which will apply our technologies to the discovery and development of genomics-based plant and agricultural products.

And there's no end in sight. Given the challenges still to be faced ... and the breakthroughs still to be discovered in biotechnology, we know that there is much more excitement, growth, and success to come. That's why there's no better time than now to bring your spirit of innovation and success to a company that reflects it, respects it, and rewards it.

► **DIRECTOR - SEQUENCING** Oversee the operations of a large cutting edge sequencing center focusing on gene discovery and pathway elucidation to support internal research projects. Employ state-of-the-art technology resulting in high-throughput, high quality, rapid turnaround and efficient sequence data generation. Drive the evaluation of new technologies relevant to high-throughput sequencing. Work as a team member with Informatics and Process Technology engineers to implement robotics and software process innovations. Candidates should have a Ph.D. or M.S. in Molecular Biology or related field, and 2-4 years' experience managing a sequencing group.

► **SCIENTIST/GROUP LEADER - TRANSCRIPTIONAL PROFILING** Build and manage a high-throughput transcriptional profiling group that supports gene discovery and validation throughout the company. This individual will be responsible for producing high quality data with a rapid turnaround, implementing process improvements, and interacting with scientists in disease programs. Candidates should have a M.S./Ph.D. in Chemistry or Engineering with a strong background in molecular biology, and experience in managing a production group in a related field.

► **DATABASE DESIGNERS/ARCHITECTS** Make a key contribution to our database design, implementation, optimization, and configuration management efforts. Requires 5+ years of relational database and object-oriented modeling, design and implementation. SQL, triggers, optimization, and stored procedures experience preferred.

► **SYBASE/ORACLE EXPERT** Take on a leadership role in the hands-on design, development, tuning, data and schema migration of very large relational databases. Become an integral part of a core application group chartered with building state-of-the-art applications to assist Millennium in its research. Work closely with Millennium's DBAs on the deployment and tuning of our application. Required skills: Expert in Sybase or Oracle, experience with UNIX scripting (preferably Perl). Bachelors in Computer Science or related field. Five years' relational database experience, with specific experience working on very large databases, four years' UNIX. Experience with distributed systems.

► **SENIOR SOFTWARE ENGINEERS - OO APPLICATIONS** We seek team-oriented self-starters interested in working with scientists to develop groundbreaking applications to support the discovery of new diagnostics, therapies, and the genetic causes of disease. Specific duties involve building next-generation, commercial, object-oriented applications for gene discovery research and product development, plus the delivery and update of software tools for scientific users, graphical interface programming, statistical analysis, feature extraction, pattern recognition and visualization of large datasets. Also includes developing software for protein ID via mass spec analysis. Requires object-oriented design and programming (JAVA, C++, Smalltalk) and SQL programming experience. Desire to work in a team environment very important.

► **SOFTWARE ENGINEER** Software development for the Bioinformatics Applications Group. Required skills include: Shell scripting, object-oriented programming language (C++, Java, Smalltalk), web development, configuration management, version control, database design, implementation, and application development. Experience with rule-based systems and algorithm development helpful. Knowledge of molecular biology, medical information systems, pharmaceutical research or chemistry a plus.

► **SENIOR SOFTWARE ENGINEERS (SMALLTALK)** We are seeking creative software professionals with exceptionally strong SmallTalk and application development skills to develop state-of-the-art applications aimed at assisting our scientists in genetic research. Superior knowledge and experience in developing applications with SmallTalk is a must. Knowledge of biology, genetics, Gemstone, Sybase (a plus but not a requirement).

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Please fax, e-mail or forward resumes, indicating position of interest and source code, to: Millennium Pharmaceuticals, Inc. Source Code: SC698 Resume Processing Center, PO Box 798 Burlington, MA 01803

Fax: 1-800-370-6925 Email: Millennium@webhire.com
(Paste/type in resume first with cover letter at end. No file attachments.)

ALL SUBMISSIONS MUST INCLUDE SOURCE CODE: SC698



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Where The Power Of Knowledge Saves Lives

The information we need to save lives has never been more accessible at **City of Hope**, thanks to a new Integrated Advanced Information Management Systems (IAIMS) grant awarded by the National Library of Medicine. As the first freestanding cancer center to receive the award, we will create an organizational mechanism that will more effectively manage the knowledge of medicine and provide for a system of comprehensive information access. After earning the grant in February, 1996, we began the planning phase of the program. Now, we are ready to bring our Clinical and Research Integrated Information System (CRIIS) into the 21st century.

The use of state-of-the-art technology is imperative when it comes to IAIMS because they are institution-wide computer networks that integrate information systems for patient care, research, education and administration. In short, they allow us to quickly and easily obtain the vital information we need to provide patients with the exceptional care that City of Hope is known for.

The successful integration of our information resources involves more than highly advanced technology. It involves the teamwork and collaboration of our talented staff. We currently have the following opportunities for you to join a world-renowned leader in cancer research, treatment and services.

Sr. Research Associate

CRIIS Coordinator

Database Architect/Administrator

Sr. Programmer/Analyst

Send/FAX resume to:

Scott Sparks, Sr. Recruiter
City of Hope

1500 E. Duarte Road
Duarte, CA 91010

FAX (626) 301-8448

E-mail: COHAPPLY@smtplink.coh.org.

For more information on other employment opportunities, visit our web site: **www.cityofhope.org**



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SENIOR BIOINFORMATICS

The successful candidate will be responsible for the development and subsequent management of the Bioinformatics Team. The team will support ongoing Genomics Projects and will consist of computer scientists including software engineers, statisticians, analysts and programmers.

A strong background in database management, client server technology, utility programming in UNIX environment and algorithm design and implementation is desired.

The requirements for this position are a Ph.D. in the life sciences and advanced training in mathematics, computer science, or equivalent, 4 years DNA sequence analysis, 4 years programming experience with a high-level language such as Pascal, C or C++, and 4 years industrial experience.

Invitrogen is a growing company delivering the most innovative products for gene cloning and expression. We are seeking motivated individuals to work as part of our team. Invitrogen has an aggressive compensation package and a rewarding professional environment.

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MAKING A WORLD OF DIFFERENCE IN BIOTECHNOLOGY

PALO ALTO, CALIFORNIA

As a global biotechnology company with revenues of \$275 million, Genencor International develops and markets innovative enzymes and biochemicals that are highly efficient and environmentally sound. Our investment in the future can be seen in our new R&D facility, which combines basic research, pilot plant development and robotics under one roof and was recently recognized as "Laboratory of the Year" by the publishers of Research & Development magazine. Currently, we are seeking the following individual to join our impressive research environment in Palo Alto.

VISITING SCIENTIST Genomics/Proteomics

You will play a lead role in the area of bioinformatics by carrying out advanced sequence analysis in areas including, but not limited to, gene expression and proteomics. This will involve "mining" proprietary and public genomic databases and analysis of expression data generated within cutting edge technologies, such as filter-based hybridization or DNA chips. You will lend considerable input on the software tools to be used. Ideally, your qualifica-

tions will include a PhD in Computer or Life Science with appropriate research experience in computational biology. In addition, you must be highly motivated, have excellent communication skills and be able to work well in a functionally integrated team environment. Knowledge of metabolic pathways is a plus. The term of the position is 2 years, with the possibility of an extension.

We offer a competitive compensation and benefits package, including 3 weeks of paid vacation and a generous 401(k) matching plan. To receive consideration, you must indicate the position/area of your interest on your CV/resume and submit to Genencor International, Inc., by email: genencor@isearch.com (no attachments, please); fax (310) 337-3369; or mail: National Resume Processing Center, PO Box 92074, Job Number: SCI609, Los Angeles, CA 90009-2074. Background checks will be conducted. An equal opportunity employer M/F/D/V.

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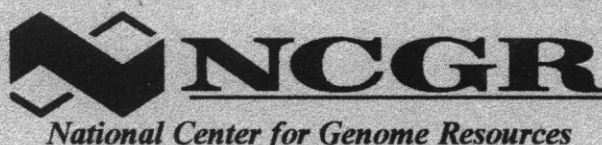
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National Center for Genome Resources

Due to our rapid growth in the field of bioinformatics and agricultural genomics, NCGR in Santa Fe, New Mexico, is seeking the following individuals:

Vice President of Bioinformatics

Highly motivated scientist needed to direct our organization's national and international effort in genomics. Will set direction for our experienced database and software development staff and scientists in developing cutting-edge bioinformatics tools and programs. Required: Ph.D. in molecular biology, genetics, or related field and relevant post-doctoral experience, first-hand experience in managing genomic projects or genomic data, experience in bioinformatics, in large-scale databases and grant writing. Strong people management skills are a must.

Computational Biologists

Will design, develop and implement algorithms and software systems for translating and integrating genomic data. Required: Ph.D. in related field or demonstrated skills in algorithm development; broad understanding of, and experience in, bioinformatics (acquisition, storage, and analysis of biological data); comprehensive knowledge of genomics; knowledge of SQL and excellent communication skills.

Computational Biology Group Leader

Will lead and develop group of computational biologists in designing, developing and implementing algorithms and software systems. Required: Proven group leader experience, Ph.D. in related field and demonstrated skills in algorithm development; broad understanding of, and experience in, bioinformatics (acquisition, storage, and analysis of biological data); comprehensive knowledge of genomics; knowledge of SQL; excellent communication and interpersonal skills.

Agricultural Genomics Group Leaders

Highly motivated and accomplished agricultural scientists needed to assist in developing and managing teams focused on a major national and international effort in agricultural genomics. Will work with experienced biological scientists, as well as database and software development staff in implementing NCGR's growing agricultural genomics program. This is an exciting opportunity to help bring agricultural systems into the genomic and post-genomic era. Required: Ph.D., relevant post-doctoral experience, demonstrated success in writing and funding of competitive grants, and demonstrated experience, managing research and collaborative projects. Desirable: first-hand experience in managing genomic projects or genomic data; experience with agribusiness. Positions available for the following groups: 1) **Agricultural Traits** - candidates must have a statistical genetics background with applied breeding perspective and experience handling large-scale data analysis; 2) **Molecular Genetics** - candidates must have an understanding of data production in high-throughput DNA sequencing and expression profiling; 3) **Germplasm** - candidates must have experience in population genetics, evolutionary genetics and biodiversity, especially focused on crop plants and their relatives; 4) **Animal Genomics** - candidates must be especially knowledgeable about the genomics of farm animals.

To find out more about NCGR, you may access our home page at www.ncgr.org.

E-mail to: hr@ncgr.org (in ascii format) or
send via fax to: 1-505-995-4461
Send via mail to: NCGR
1800-A Old Pecos Trail
Santa Fe, NM 87505

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AT MONSANTO.**

And we're even more focused on the future. That's why our entire organization, from agricultural biotechnology to pharmaceuticals to food ingredients, is dedicated to life sciences. Now, we can answer the questions, needs and demands of our ever-changing planet. After all, the world's resources are finite, but our vision for the future is limitless. Currently, we have the following opportunities available for individuals to join our organization:

PHARMACOLOGIST (PH.D. LEVEL)

We seek a Ph.D. scientist with 5-10 years of academic or industrial experience in pharmacology and/or drug development who is trained in biochemistry, as well as cellular and molecular biology. The selected individual will elucidate signal transduction pathways during immune cell activation *in vitro* and *in vivo*.

Training in the activation of transcription factors and/or cell cycle regulation desired; previous supervisory experience with a group/team size of 5+ required. (Job code: P5)

For immediate consideration for these positions, please send your CV and three letters of reference, to: **E. Foster, Monsanto Company, Job Code: _____ (select from above), 700 Chesterfield Pkwy., Mail Zone: BB5B, Chesterfield, MO 63167.**

SCIENTIST (POSTDOCTORAL LEVEL)

Ph.D. scientist trained in arachidonic acid metabolism and biochemistry wanted to dissect mechanistic role of this pathway in immune cell physiology an *in vivo* models of inflammation. Training in lipid metabolism and methodology, as well as in cellular biology and tissue culture required.

For immediate consideration for this position, please send your CV, three letters of reference, and a cover letter detailing your experience and scientific interest to: **Dr. Philip Needleman, Senior Vice President and Chief Scientist, Monsanto Company, 800 North Lindbergh Blvd., Mail Zone: A3SC, St. Louis, MO 63167.**

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**UNIVERSITY OF PENNSYLVANIA
SCHOOL OF MEDICINE CHAIR
DEPARTMENT OF NEUROSURGERY**

The University of Pennsylvania School of Medicine seeks outstanding candidates for the position of Professor and Chair of the Department of Neurosurgery.

The successful applicant will be a national leader in the field and will provide academic leadership to establish a premiere department of Neurosurgery. Applicants should have demonstrated qualifications in education, research, administration, and clinical services.

The University is an equal opportunity, affirmative action employer: Women, minority, and international candidates are encouraged to apply. Letters of interest, CV, and names of references should be sent to:

Arthur K. Asbury, M.D.
Chair, Neurosurgery Search Committee
Department of Neurology
University of Pennsylvania Health System
3 West Gates Building
Philadelphia, PA 19104-4283

BIOINFORMATICS CAREERS

The University of California at San Francisco (UCSF) Sequence Analysis and Consulting Service (SACS) is seeking a Specialist in Bioinformatics to join our staff. SACS provides access to DNA and protein sequence analysis software, databases, and consulting services for more than 100 molecular biology laboratories at UCSF. SACS is a division of the UCSF Computer Graphics Laboratory, with research interests spanning the triad of protein sequence, structure, and function.

Candidates will have extensive understanding of DNA and protein sequence analysis methods and substantial knowledge of laboratory molecular biology techniques. Demonstrated competency writing UNIX scripts and application programs in languages such as PERL, C, C++, or JAVA. Minimum Bachelor's degree in science or engineering. Four years experience using the UNIX operating system preferred. Desire to make innovative contributions to research methodologies and sequence analysis techniques through computer software. *U.S. citizenship or permanent residency required.* For more information, please see <http://www.cgl.ucsf.edu/cgl/jobs.html>.

Potential applicants for this position should submit their résumé, including at least three references, to Mr. Christopher Botka (botka@cgl.ucsf.edu), Director, UCSF Sequence Analysis and Consulting Service, 513 Parnassus Avenue, S-926, San Francisco, CA 94143-0446. UCSF is an Equal Opportunity Employer.



BIOINFORMATICS CAREERS

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Bioscience

Roche Bioscience offers an exciting environment of innovation in human pharmaceutical research. Situated in one of California's most vital technological regions, our Palo Alto campus presents a unique setting that combines the synergy of science and business to produce research that delivers results. Our growing Bioinformatics area underscores our commitment to creating a future of industry firsts as we move novel products through our strong pharmaceutical pipeline in California's Biotech Bay.



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**BIOINFORMATICS
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Department of Bioinformatics

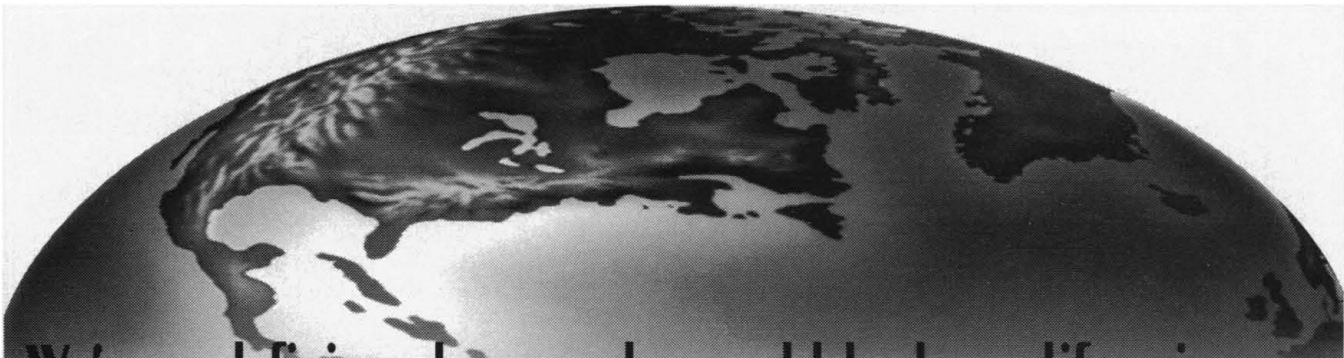
We seek a Scientist who will collaborate with research teams and assist in the identification and validation of novel gene targets. Responsibilities include the analysis of DNA and protein sequence data, including interpreting results of sequence and motif searching and the application of advanced data mining methodologies to expression array data. PhD or equivalent with 0-4 years relevant experience or an MS with 10+ years of experience required. Proven technical proficiency, scientific creativity and the ability to work independently as well as collaboratively are a must. Strong database skills, UNIX, and programming are desirable. Job Code: SCI6598-KHA

**BIOINFORMATICS RESEARCH SCIENTIST
Department of Molecular Pharmacology**

Focusing on bioinformatics experiments, you will conduct and supervise research in data analysis and data mining to aid identification, cloning and expression of novel gene targets for drug discovery programs. This will include performing DNA and protein sequence analysis using public/proprietary databases, data mining, and gene expression analysis techniques. You will also analyze and integrate information from "dry lab" experiments and perform experiments using DNA chips. PhD in Molecular Biology/Computational Biology and 2-3 years experience with demonstrated expertise in sequence analysis and gene expression are required. Excellent computational skills and/or experience in gene chip technology preferred. Effective interpersonal/communication abilities with some programming skills will also be necessary. Proven technical proficiency, scientific creativity and the ability to work independently as well as collaboratively are essential. Job Code: SCI6598-KHB

Located in the San Francisco Bay Area—close to Stanford University and near scores of biotechnology companies—Roche Bioscience is proud to offer competitive salaries and a full benefits package, which includes incentive bonuses, relocation assistance, and 401(k) and pension plans. Our progressive environment also features an on-site Fitness Center to help our employees maintain the best possible quality of life. If you would like to be a part of the industry firsts that are happening here, apply today by sending your resume, indicating the job code corresponding with the position of your interest, to: Roche Bioscience, 3401 Hillview Avenue, A2-HR, Palo Alto, CA 94304. Fax 650/424-8159. As an equal opportunity employer, we are committed to workforce diversity.

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And we're even more focused on the future. That's why our entire organization, from agricultural biotechnology to pharmaceuticals to food ingredients, is dedicated to life sciences. Now, we can answer the questions, needs and demands for our ever-changing planet. After all, the world's resources are finite, but our vision for the future is limitless. We currently have the following opportunities for individuals to join our organization:

PHARMA SECTOR, SEARLE (DISCOVERY)

CARDIOVASCULAR PATHOLOGIST (Cardiovascular Discovery Franchise)

You will lead efforts to identify new drug targets addressing the progression of atherosclerosis and congestive heart failure. Your responsibilities will include evaluating the pathologies of related cardiovascular disease models, as well as using the results to evaluate drug candidates and perform concept testing of novel therapeutic mechanisms. This opportunity is available at our Pharma Sector, located in St. Louis, MO.

We require a DVM, Ph.D., or MD, along with 3-5 years of related experience. A strong research background in cardiovascular pathology/histology is necessary, as is a proven record of accomplishments in studying vascular disease. Excellent communication and interpersonal skills are essential. **Job Code: CP-JS.**

SENIOR SCIENTISTS (Discovery Thrombosis Research)

In this position, you will provide scientific leadership and input into a strong team-oriented research effort in thrombosis and coagulation. Additionally, you will propose and initiate new therapeutic targets for the treatment of cardiovascular thrombotic diseases, as well as serve as a formal leader for drug discovery project teams in a matrix environment. These opportunities are available at our Pharma Sector, Searle, located in both Chicago, IL and St. Louis, MO.

The ideal candidate will possess a Ph.D. or equivalent, along with 5-8 years of research experience in drug discovery, preferably in a pharmaceutical and/or biotech industry, though comparable research and leadership experience will be considered. Additionally, we require a demonstrated understanding and/or background in biochemistry or molecular biology/genomics with an in-depth knowledge of platelet signaling mechanisms, integrin receptors, and other aspects of blood coagulation. Strong scientific credentials in platelet biology or blood coagulation is also required, as are good communication and teamwork skills. **Job Code: NN-J309.**

SEARLE POSTDOCTORAL FELLOWSHIPS IN BIOINFORMATICS

Interacting with both bioinformatics and drug discovery scientists, you will experience the latest in genomics and bioinformatics research procedures, including hardware, software tools, and biological databases. You will also have the opportunity to develop a broad background in sequence analysis and programming. Other areas of pursuit may include pattern recognition software, data visualization tools and data presentation techniques, or bioinformatics and database mining in relation to human disease. These opportunities are available in our Pharma Sector, located in St. Louis, MO.

We require a Ph.D. in Computation Biology, Molecular Biology or Genetics. Experience with UNIX is essential, as is a working knowledge of Blast and GCG. Programming skills in Perl, C++ or Java are a plus. **Job Code: PBIOS**

PHARMA SECTOR, SEARLE (PRE-CLINICAL)

STUDY COORDINATOR

The qualified candidate will plan the conduct of toxicology studies under the supervision of the Study Director and communicate effectively in keeping the Study Director informed of all study events. You will work closely with the primary technician in assuring that all protocol-driven activities are conducted as specified. You will also be responsible for computer-generated protocol setup, IACUC submissions, and routing of formal protocols for approval. Additional responsibilities

include: monitoring documentation of procedures in all areas which contribute to the study and performing a quality control and technical review of the data prior to submission to the Quality Assurance Unit; facilitating communication and planning between technical resource centers and ensuring that the interphases are well-organized and complete; contributing to the QA audit responses and data presentation; and generating the regulatory pages, methods and materials, summary tables and individual appendices of study reports. This opportunity is available at our Pharma Sector, Searle, located in Chicago, IL.

The selected individual must have a Bachelor's degree or equivalent and 3+ years experience in a similar job situation. The ability to interpret and understand the technical interactive components of the study protocol dictating a wide variety of study designs from acute to chronic toxicology/carcinogenicity studies is required. Working knowledge of a variety of computer software programs and spreadsheets is essential. **Job Code: SC**

MONSANTO FOUNDATION & CORE CAPABILITIES

BIOINFORMATICS TEAM LEADER

The successful candidate will lead a team to develop and implement high-speed, high-throughput information and biology technologies in Monsanto's rapidly growing genomics initiative. This includes supporting sector genomic science laboratory automation processes, application development/training, web-based information/application access, advanced tools for data-mining and the genomics data warehouse. This opportunity is available in St. Louis, MO.

We require a BS or MS in an information technology related major with at least 5 years experience in a commercial or university computing environment. Knowledge of effective project management tools/techniques, business drivers and problem solving techniques are essential, while experience with biological systems, object languages and web-based systems are a plus. Some travel is required. **Job Code: TL.**

BIOINFORMATICS APPLICATIONS SUPPORT

The qualified candidate will join a team that provides software, database development/support and user training for Monsanto's bioinformatics tools as Monsanto's research facilities in St. Louis, MO, San Diego, CA, Davis, CA, Madison, WI, Louvain-La-Neuve, Belgium, and Bangalore, India. These tools include GCG, Monsanto's proprietary plasmid database (Pollux), Sequencher, and LaserGene. Duties will include holding regular classes in DNA sequence analysis as well as maintaining the plasmid database/client and use GCG's Software Development Kit to write new programs to meet specialized needs of the research community. Many opportunities will be available to work on research-oriented bioinformatics projects. This opportunity is available in St. Louis, MO.

We require a BS or MS degree with 3+ years laboratory experience in cloning and PCR techniques or a Ph.D. in Molecular Biology or related field. Experience with sequence analysis software such as GCG, MacVector, LaserGene, and/or Sequencher, including experience in providing training and support. Programming experience in any of C, FORTRAN, C++, Java, Perl, or UNIX shell scripting as well as with UNIX and Windows 95/NT. **Job Code: BAS.**

For consideration for the Monsanto Foundation & Core Capabilities positions (the above two positions only), please send/fax your resume to: The Monsanto Company, Attn: Staffing, Job Code: _____, (select from above) 800 N. Lindbergh Blvd., Mail Zone E2NB, St. Louis, MO 63167. Fax: 314/694-2724.

For consideration for the Pharma Discovery & Preclinical positions (the first four positions only), please send/fax your resume to: The Monsanto Company, c/o Searle, Attn: Staffing, Job Code: _____, (select from above) 700 Chesterfield Pkwy., Mail Zone BB5B, Chesterfield, MO 63198. Fax: 314/737-6419.

We offer a total compensation package including market salaries, as well as annual and long-term incentives based on individual and company performance. In addition, we offer excellent benefits, including tuition reimbursement, relocation assistance, and matching 401(k) programs! Please visit our website at www.monsanto.com. EOE/AA Employer M/F/D/V.

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Genomics Discovery Job Openings

DEKALB Genetics Corporation is the fastest growing agricultural seed company in the U.S. We seek bright, innovative, and ambitious people to join our expanding biotechnology research team focused on the genetic improvement of crop plants.

WHOLE-GENOME RADIATION HYBRID PANEL

Scientist - (GD-S1) - Construction and use of maize radiation hybrid panels for high-throughput gene mapping. This position requires demonstrated experience with whole-genome radiation hybrids. Experience in a high-throughput environment is desirable. Ph.D. and 0-3 years experience required.

Research Associate (GD-RA1) - Construction and use of maize radiation hybrid panels for high-throughput gene mapping. Experience with both tissue culture and basic molecular biology techniques required. M.S. or B.S. and 3+ years experience required.

Research Assistant (GD-RAS1) - Construction and use of maize radiation hybrid panels for high-throughput gene mapping. Experience in basic molecular biology and tissue culture techniques required. B.S. required.

PHYSICAL MAPPING

Scientist - (GD-S2) - Construction of physical map of maize genome. This position requires demonstrated expertise in the construction and use of large insert genomic libraries and an interest in exploring new mapping methods for use in the highly repetitive corn genome. Experience in a high-throughput environment is desirable. Ph.D. and 0-3 years experience required.

Research Associate (GD-RA2) - Construction of physical map of maize genome. This position requires advanced molecular biology skills and experience with related software. M.S. or B.S. and 3+ years experience required.

Research Associate (GD-RA3) - Identification and scoring of polymorphisms in candidate genes. This position requires advanced molecular biology skills and experience with related software. M.S. or B.S. and 3+ years experience required.

Research Assistant (GD-RAS2) - Construction of physical map of maize genome. Requires experience in basic molecular biology techniques. B.S. required.

GENETIC MAPPING

Scientist - (GD-S3) - Construction of a high-density polymorphism map in maize. This position requires a demonstrated expertise in polymorphism identification and the ability to create and manage a large-scale mapping program. Ph.D. with 0-3 years experience required.

Research Associate (GD-RA4) - Construction of a high-density polymorphism map in maize. This position requires advanced molecular biology skills and experience with related software. M.S. or B.S. and 3+ years experience required.

Research Assistant (GD-RAS3) - Construction of a high-density polymorphism map in maize. Requires basic molecular biology experience and good organizational skills. B.S. required.

FUNCTIONAL GENOMICS

Scientist - (GD-S4) - Development of transposon-based gene tagging/modification systems. This position requires a demonstrated expertise with genetic screens, selections and mobile genetic elements. Ph.D. with 0-3 years experience required.

Research Associate (GD-RA5) - Development of transposon-based gene tagging/modification systems. This position requires knowledge of both molecular biology and plant tissue culture techniques. M.S. or B.S. and 3+ years experience required.

Research Assistant (GD-RAS4) - Development of transposon-based gene tagging/modification systems. Experience in basic molecular biology techniques and tissue culture. B.S. required.

BIOINFORMATICS

Project Leader - Development of integrated genetic and physical map for cereals. This position requires a demonstrated expertise with genomic mapping software and the ability to lead a small bioinformatics group. Ph.D. with 0-3 years experience required.

FOR THIS POSITION ONLY, send resume with cover letter to: **DEKALB Genetics Corporation, Human Resources/PL, 3100 Sycamore Road, DeKalb, IL 60115. Fax: (815) 756-8824.**

Positions are located at DEKALB's biotechnology research facility in Mystic, CT, a scenic shoreline community located on Long Island Sound, halfway between Boston and New York. DEKALB offers a competitive compensation, attractive benefits package, and an outstanding work environment. For more information on DEKALB, visit our web site at <http://www.dekalb.com>. Please send/fax your resume, cover letter indicating position for which you are applying, and 3 professional references for all positions (EXCEPT BIOINFORMATICS PROJECT LEADER) to: **DEKALB Genetics Corporation, Human Resources, 62 Maritime Drive, Mystic, CT 06355-1958. Fax: (860) 572-5240. EOE**

JOIN A LEADER IN GENE THERAPY

Cell Genesys is focused on the development and commercialization of gene therapies to treat major life-threatening diseases, including cancer and AIDS. We are currently seeking experienced professionals for the following positions:

SCIENTIST II

In this important role, you will develop gene therapy applications for diseases of the CNS, including, but not limited to, chronic pain and Parkinson's disease. You will also manage the histology group. Requires a PhD, postdoc work and a minimum of 2 years industry experience. Qualified candidates have previously managed technicians and possess working knowledge of stereotactic and spinal administration of compounds, as well as animal models of neurobiology. Job Code: S2JMC

SCIENTIST

We seek a highly organized Scientist to work on our adenovirus vector program. Essential functions will include supervising and carrying out adenovirus vector assembly, cell line construction, and vector purification, as well as supervising experiments for vector quality analysis and performing adenovirus biology experiments. Requires a PhD or MD and a strong background in molecular genetics and virology, as well as a working knowledge of regulated expression. Must possess relevant postdoctoral training and the following skills: subcloning, PCR, Southern blotting, mRNA analyses, tissue culture, transfection and cell cloning. Job Code: SSH

SENIOR RESEARCH ASSOCIATE/ ASSOCIATE SCIENTIST

We seek a team player to design, build and test AAV and Lentiviral Gene transfer vectors, focusing on improved biosafety and performance profiles, and provide molecular biology support to the AAV vector development project. We will rely on you to participate in developing the Lentiviral research plan, write reports for patent purposes, and contribute to manuscripts for publication. Requires a BS and 8 years experience (6 yrs with MS) or a PhD with relevant postdoctoral experience. Must be a strong communicator and have skills in the following: molecular biology, DNA/RNA isolation/manipulation, cell culture, FACS analysis, and strong communication. Retroviral/Lentiviral transduction and/or Cell-type specific gene expression experience a definite plus. Job Code: SRATD

SENIOR RESEARCH ASSOCIATE

Working closely with Scientists and RAs on our adenovirus vector program, you will handle vector assembly, production and purification. Other functions will include molecular testing and written/oral presentations. Requires a Masters or 3+ years of relevant experience, including industry work in molecular genetics. Must be skilled in subcloning, PCR, Southern blotting, tissue culture, transfection and cell cloning. Virology experience is a plus. Good communication skills are essential. Job Code: SRASH

SENIOR DEVELOPMENT ASSOCIATE/ ASSOCIATE SCIENTIST

You will oversee the immunoassay area, directly supervising personnel and completing performance evaluations. You will also be responsible for all aspects of the immunoassay function, including interacting with assay users, handling prioritization/scheduling, troubleshooting, evaluating assay performance, and performing assay development. Requires a BS or equivalent and 10 years immunoassay experience. Must have exceptional written/verbal skills with meticulous attention to detail, documentation and organization. Experience working with HIV is highly desirable and working knowledge of GMPs/GLPs is helpful. Job Code: ASRL

For more information on these positions,
please visit our Web site at <http://www.cellgenesys.com>

Cell Genesys is dedicated to developing important human healthcare products in gene therapy. We are equally committed to those who make up our team and provide our employees with excellent salaries and a full benefits package. To learn more, please forward your CV/resume/written inquiries to: **CELL GENESYS, INC., Attention: Human Resources, 342 Lakeside Drive, Foster City, CA 94404. FAX (650) 349-4785. Or e-mail your resume to HR@cellgenesys.com. We are an equal opportunity employer.**



CELL GENESYS

JOIN US FOR THE FUTURE

Maine Medical Center is a 598-bed tertiary care and teaching institution with a multi-state referral base, located in Portland, Maine. This New England city has one of the country's most picturesque coastlines. It offers an exciting waterfront area, countless recreational activities and a wealth of cultural attractions. As the largest city in the state, Portland is exceptionally diverse and always exciting.



FACULTY POSITIONS

Center for Molecular Medicine

Maine Medical Center Research Institute

The newly created Center for Molecular Medicine is currently undergoing a vigorous expansion. The Center's major focus will be on the molecular mechanisms of human disease including diseases of the cardiovascular system, bone and mineral metabolism, and cancer. Applications are invited at the Assistant, Associate and Full Member level. Individuals using modern cell, molecular and/or genetic (vertebrate or invertebrate) methods to elucidate molecular mechanisms of human disease are encouraged to apply. Center faculty will have access to excellent resources including generous start-up funds and space in a new state-of-the-art research building presently under construction. In addition, the successful candidate will be encouraged to interact with existing clinical programs at the Maine Medical Center.

The successful candidate will be expected to establish an independent basic research program that will attract extramural funding and will complement existing research programs at the Center. These include characterization of novel secretion pathways for signal peptide-less proteins, development of novel inhibitors or tumor development, pathobiology or vascular remodeling, functional characterization of growth factor, cytokine and cell fate determinant signaling, and the molecular genetics of human bone development, tissue/organ repair and neoplasia.

Rank and salary will be commensurate with qualifications and experience. The Portland area offers an environment rich in cultural and recreational opportunities. Applicants should send a curriculum vitae, three letters of reference and a brief statement of research interests to: **Dr. Robert E. Friesel, Search Committee Chair, Maine Medical Center Research Institute, 125 John Roberts Road, Suite #12, South Portland, ME 04106.** We are an equal opportunity employer strengthened by the diversity of our professional community.


Maine Medical Center
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An Affirmative Action Employer.*

EXTRAORDINARY PEOPLE. EXTRAORDINARY SCIENCE.



The Whitehead Institute/MIT Center for Genome Research has become a world leader in functional genomics, genome mapping, sequencing, and informatics. The Center attracts the brightest scientists to develop and utilize state-of-the-art automated systems for data production and analysis in an exciting and challenging atmosphere.

MANAGER OF COMPUTER SYSTEMS OPERATIONS

- To be responsible for all aspects of systems management and user support for the Center for Genome Research including supervision of the systems operations staff. The system is comprised of a range of Unix-based (AIX, Digital Unix, Solaris) file, database, mail, Web, and application servers, along with desktop systems emphasizing Windows NT and Macintosh, which support a variety of scientific, technical, and administrative staff, including several in-house software development teams. Desktop systems support activities ranging from basic word processing, spreadsheets, and graphics to instrument control, including DNA sequencers and robots. Requirements include: BA/BS preferably in engineering, physical, or mathematical sciences and a minimum of 5 years' related experience in a variety of computing environments, good management and communication skills, and ability to respond to a dynamic work environment prone to rapid change and last minute deadlines.

SOFTWARE ENGINEER - DATABASE APPLICATION DESIGNER

- Will apply database skills in a meaningful, leading-edge and fast-moving environment. Responsible for shaping the systems that manage the very latest high-throughput laboratory genomics and DNA sequencing environments, interacting with biology and genomics teams to translate requirements into robust, high-performing application and database designs, and using the latest technology to architect and deploy solutions for scientific and laboratory management problems. Requires a BA/BS/MS in Biology/Computer Science or related, at least 2 years' professional software development experience including experience with a commercial relational DBMS. Must be able to demonstrate strong ability with RDBMS technology and tools appropriate for development projects (e.g. contemporary 4GL development tools). Sybase or Oracle is preferred. At least 1-2 years' database modeling and design experience preferred, but demonstrable ability to lead complex application and database design efforts is required. Must have some knowledge of intranet/internet development tools, for example Perl, CGI, HTML, Java, JavaScript. Related experience in bioinformatics, biology, genomics, laboratory information systems (LIMS), industrial automation is preferred.

SOFTWARE ENGINEERS

- To design, implement, and maintain tools and software systems in Perl, C, C++, Java, and other languages, in a Unix and Web-based environment. Programs will be designed in consultation with biologists and computer scientists, and will be implemented in projects for which you will have the primary responsibility. Must be technically flexible and comfortable with rapid prototyping and frequent user interaction in small research teams. Must have coding and system building skills experience in Unix or Windows NT writing software in Perl, C, C++, Java or other languages in addition to excellent written and verbal communication skills, initiative, and problem-solving abilities. Requires a BA/BS in computer science or another field if accompanied by significant programming experience. Ph.D. preferred for some senior level positions.

SCIENTIFIC PROGRAMMERS

- To be responsible for devising and implementing solutions for data analysis and process control needs in project that could include high-throughput physical and genetic mapping, genetics of human disease and next-generation high-throughput functional assay techniques such as DNA chips. Requires BS degree in computer science, biology, chemistry or physics or equivalent experience, and hands-on data analysis, software development, or information system integration in industry or academia, and coursework or prior professional involvement with molecular biology. Must have facility with diverse computing environments including programming ability.

We offer excellent salaries, generous benefits (including tuition reimbursement), interaction with MIT community, opportunity to attend scientific lectures, and state-of-the-art research facilities.

Please send resumes to: Whitehead Institute for Biomedical Research, Human Resources Dept., Ref. SCI: 605, Nine Cambridge Center, Cambridge, MA 02142.

Visit our web site at: <http://www.wi.mit.edu>.

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WHITEHEAD INSTITUTE

MEMORIAL UNIVERSITY OF NEWFOUNDLAND
St. John's, Newfoundland, Canada A1C 5S7
Department of Biology
Cell Biologist

The Department of Biology invites applicants for a new tenure-track position at the Assistant Professor rank in Cell and/or Developmental Biology. The successful candidate will be expected to develop a strong research program and to contribute to teaching in a core course in cell biology, as well as to develop and contribute to senior undergraduate and graduate courses in his/her areas of specialization, e.g., developmental biology, cellular physiology. Experience in microscopical techniques will be an asset. The Departments of Biology and Biochemistry are jointly strengthening their cell and molecular biology programs through an appointment to each Department; the Cell Biologist will be cross-appointed to the Department of Biochemistry. The Department also has strong ties and a joint graduate program with the Ocean Sciences Centre at Memorial.

Applications containing an outline of research and teaching strengths, curriculum vitae, and a maximum of five representative publications should be directed to **Dr. Murray H. Colbo, Head, Department of Biology, Memorial University, St. John's, Newfoundland, Canada, A1B 3X9**, by July 2, 1998. Three letters of reference should be sent to the same address.

Short-listed candidates will be expected to provide an NSERC-type research proposal. Enquiries can be directed to **mcolbo@morgan.ucs.mun.ca** with additional information on Memorial University available at **www.mun.ca**.

Memorial University is committed to the principle of equity in employment. In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.

Staff Fellow
Opportunities at FDA

FDA, Center for Biologics Evaluation and Research, Office of Blood Research and Review, Division of Transfusion Transmitted Diseases, Lab of Immunochemistry has immediate openings for two postdoctoral fellows (1 Senior, 1 Staff).

Senior Staff Fellow—Applications are invited from candidates with a strong background in virology and immunology to study mechanisms of HTLV pathogenesis and HTLV antibody responses. Candidates must have a Ph.D. and/or M.D., with less than five years of postdoctoral experience.

Staff Fellow—Applications are invited from candidates with a strong background in bacterial molecular genetics and nucleic acid-based diagnostics to study bacterial contaminants of blood and blood products. Candidates must have either a Ph.D. and/or an M.D. and less than 3 years of postdoctoral experience.

Other duties for both positions: involve scientific review of Investigational New Drug Applications (INDs), Investigational Device Exemption Applications (IDEs), Product License Applications (PLAs) and Amendments, Premarket Approvals (PMAs), Premarket Notifications (510Ks), for immunodiagnostic devices developed for screening of blood and blood products.

Requirements: *Candidates must be U.S. citizens.* Candidates must have completed all requirements from an accredited institution for a doctoral or medical degree.

Salary range: (based on experience)

Senior Staff Fellow—\$39,270 to \$101,142—**Medical Officer**—\$64,349 to \$101,142.

Staff Fellow—\$32,457 to \$85,978—**Medical Officer**—\$43,929 to \$90,426

Location: Laboratories are located on the National Institutes of Health campus in Bethesda, MD. Candidates should send a current curriculum vitae, bibliography, statement of research interest, and names of 3 references to: **FDA/CBER, 1401 Rockville Pike, Suite 200 N, HFM-123 (BL), Rockville, MD 20852-1448.**

FDA has an Equal Opportunity Employer and has a smoke-free environment.

**HEMATOPOIETIC
PROGENITOR CELL
RESEARCH**

Amgen is the world's largest biotechnology company. We currently have career opportunities available for a postdoctoral position in Hematopoietic Progenitor Cell Research.

The successful candidate will study the molecular analysis and functionality of genes expressed in hematopoietic cell lineages. Experience in molecular cloning and gene analysis is essential. This position requires a recent Ph.D. graduate with 0-3 years of postgraduate training.

At Amgen, your accomplishments are rewarded. We offer a highly competitive compensation and benefits package that includes a retirement and savings plan, an on-site fitness center and three weeks vacation. For immediate consideration, please mail your resume on plain white paper (using standard type and fonts, no bullets, italics, underlining or bolding) to: **Amgen, Staffing, Job Code: 0000000023, P.O. Box 2569, Thousand Oaks, CA 91319-2569**, or e-mail your ASCII text resume to: **jobs@amgen.com**. Please consult our Web site at **www.amgen.com** for other career opportunities at Amgen. Principals only, please. We recognize that diverse perspectives are a key factor in the process of discovery. EEO/AA Employer M/F/D/V.

AMGEN®

Hexos, Inc.

Hexos, Inc. is a dynamic biotech company engaged in the discovery of novel therapeutics to treat type 2 diabetes and prevent diabetic complications. Our continued growth has created an opportunity for a motivated molecular biologist to establish a program to evaluate potential drug targets arising from Hexos' molecular screening platform.

Senior Scientist / Molecular Biology: The successful candidate should have extensive experience in antisense technology, heterologous gene expression, and mammalian cell culture. Through manipulation of gene expression in cellular models of disease, you will elucidate the role of target proteins in the pathogenesis of insulin resistance and glucose toxicity. The position requires a Ph.D., at least 3 years of postdoctoral research, demonstrated research accomplishments, excellent communication skills, and the ability to work in a multi-disciplinary team environment. *Candidates must also have U.S. citizenship or permanent residence status.*

Hexos offers an exciting research environment in the Pacific Northwest (near Seattle), a competitive salary with comprehensive benefits, and relocation assistance. For consideration, send a cover letter, résumé, and list of references to: **Human Resources, Hexos, Inc., 22118 20th Ave. S.E., Suite G-142, Bothell, WA 98021.**

**Transgenics
Manager**

We are an industry leader in genetic research and product development located in the Midwest. We are seeking a hands-on seasoned professional to manage our Transgenics facility. The ideal candidate will have experience with supervising highly skilled employees, making presentations to and interacting with senior and executive level management. This is a senior management position with budgeting and project evaluation responsibilities, and oversight of our molecular biology animal sciences group.

Expertise in the following areas required: generation of germ-line transmitting chimeric mice by blastocyst injection of genetically engineered ES cells; development of genetically engineered ES cells through electroporation of targeting vectors; molecular biology techniques that involve the engineering of targeting vectors for homologous recombination in ES cells; surgical transfers of embryos. Position requires 4-6 years of related experience, excellent interpersonal and communication skills. Master's degree in Biology or related field required, Ph.D. preferred. Competitive salary and excellent benefits package. Interested and qualified applicants, send cover letter and resume to:

AC Confidential Reply Service
Dept. 92057
1304 W. Roseburg Ave.
Modesto, CA 95350

INDUSTRIAL LIAISON

PROJECT I

Project I at Arizona State University is a University-wide research initiative designed to enhance long-term interdisciplinary research and education in the rapidly developing field of light-driven biological and chemical processes and to promote the application of this knowledge to problems in science and engineering. Basic and applied interdisciplinary research on light-driven reactions such as photosynthesis holds great promise and offers broad impact in diverse areas such as the development of novel light-driven technologies such as molecular devices, molecular scale photoelectronics, light-dependent catalysts and probes, and light-driven biosystems. Capitalizing on its leading position in photosynthesis and related fields, Arizona State University is poised to expand and broaden this area of excellence through Project I.

Project I is expected to lead to the development of extensive collaborations between the basic and applied sciences and industry. To aid in this process, we are accepting applications for an administrative professional (industry liaison). The successful applicant is expected to have 10 years of experience in developing industry-university collaborations and a Master's degree in life science, chemistry, biochemistry, engineering, or related field. A Ph.D. degree in science or engineering is desired. This position will report to the Director of Research and Development at Arizona State University.

Website - Additional information regarding Project I and requirements for these positions are available at the following URL: <http://photoscience.la.asu.edu/photosyn/Ingenhousz>

Application Procedure: Applicants must send a letter, detailed curriculum vitae, and a list of the names, addresses and telephone numbers of three professional references to: **Patrick J. Burkhart, Office of the Senior Vice President and Provost, Arizona State University, Tempe, AZ 85287-3403.** First screening of these applications will begin **June 29, 1998** and bimonthly thereafter until filled.



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TOXICOLOGIST

We are seeking an individual to oversee non-clinical drug safety evaluation studies. This includes selecting contract labs; performing on-site monitoring; reviewing, summarizing, and interpreting the studies as well as writing non-clinical portions of regulatory submissions, both domestic and international. Approximately 40% travel will be required. A Ph.D. in Toxicology is preferred with at least 3 years' experience performing non-clinical toxicology/drug evaluation studies at a pharmaceutical company or contract laboratory. Solid knowledge of pharmaceutical regulatory toxicology and GLPs is a must. Knowledge of opioid pharmacology/toxicology and non-clinical development of biologicals is desirable.

PHARMACEUTICAL ANALYSIS SCIENTISTS

Successful quality-oriented, analytical scientists will be responsible for assay development and validation, specifications, dissolution methodologies and special projects. Industrial pharmaceutical analysis experience in research and development is required, as well as experience with HPLC, GC, UV/VIS, and wet chemistry. Knowledge of GMPs and good documentation skills are essential. Requirements include a BS or MS Degree in Chemistry.

PHARMACOLOGIST/ BIOLOGIST

The selected individual will design and perform preclinical *in vitro* and *in vivo* studies for the evaluation of pharmacological agents on biological systems. Required experience includes receptor binding assays, high throughput screening, cell and tissue culture, Northern/Western blots, HPLC, TLC, RIA, ELISA, microscopy, and staining. Experience in animal handling (dosing, immunizing, blood collection) is also needed. Applicants must be capable of providing written draft protocols, study plans and results for a variety of report formats. A BS or MS degree is necessary (Biochemistry or Pharmacology preferred). Experience (academic, government, industry) in a broad range of biological disciplines is helpful. Qualified individuals will be familiar with software that will provide analysis and reports.

Purdue Pharma L.P. offers competitive salaries, an extensive benefits package and excellent opportunities for personal advancement and professional growth. Company standards require drug testing and background investigation. Please mail or fax resumes, indicating position of interest, to: **Purdue Pharma L.P., Dept-SR/SM, 99-101 Sawmill River Road, Yonkers, New York 10701; FAX: (914) 966-4390.** An Equal Opportunity Employer M/F/D/V.

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Science into Practice



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In the world of healthcare, few companies are in a position to do so much for so many as Hoffmann-La Roche. Our mission is to identify and satisfy the healthcare needs of the world. In our never-ending quest for innovative products, we exercise imagination, ingenuity and an uncompromising pursuit of discovery.

Hoffmann-La Roche's dedication to the future is evident in our commitment to the research, development and manufacture of pharmaceuticals worldwide. We currently have a position available for a dedicated, experienced scientific professional to join us in our U.S. headquarters in **Nutley, New Jersey.**

Senior Scientist

The successful candidate will join an established protein analytical group, which partners proactively with pre-clinical research and development. Your major responsibilities will include the characterization of primary protein and peptide structures and related biomolecules for discovery and development with the use of analytical methods such as amino acid analysis, amino acid sequence analysis with automated Edman degradation and mass spectrometry, and molecular weight determination with PAGE and mass spectrometry. You will also participate in the preparation of scientific reports and development of new analytical methods.

In order to qualify, you must have a BS/MS or equivalent in Chemistry, Biochemistry or related field with 5 plus years' practical experience. Additional requirements include scientific and technical knowledge and experience in the application of analytical methods (HPLC, PAGE, etc.); solid biochemistry knowledge; the ability to collaborate on multiple projects simultaneously; and strong communication skills.

At Roche, we not only offer employees competitive salaries and comprehensive benefits, but we also offer a unique campus-like facility, state-of-the-art fitness center and on-site childcare. For consideration, please forward your resume to: **Hoffmann-La Roche, R&D Human Resources, Dept. 98-0045, Bldg. 76/508, 340 Kingsland Street, Nutley, NJ 07110.** Principals only. We appreciate your interest in Hoffmann-La Roche but can only respond to qualified candidates. Hoffmann-La Roche is an equal opportunity employer fully committed to diversity in the workplace.



STAFF SCIENTIST

Medtronic Heart Valves, a leading manufacturer of heart valves, has an immediate opening in its Research Department for a Staff Scientist.

You'll put your highly-developed skills to work researching tissue preservation for biologic and synthetic heart valve applications. With involvement throughout all phases of product development, you'll prepare technical reports based on experimental data, and help our team to develop the next generation of products to enable heart patients to live fuller, healthier lives. Your qualifications will include a Ph.D. in Biochemistry or Cellular/Molecular Biology (relevant Post-Doctoral medical research experience preferred), and 3-5 years' industrial research experience with biologic tissue preservation and/or function. We prefer Class II or III device experience producing market-ready products; plus knowledge of histology, immuno histology, SEM and TEM.

We offer competitive compensation/benefits and excellent working conditions. For immediate consideration, please fax/mail resume, with salary history, to: **Medtronic Heart Valves, Attn: HR, 18011 S. Mitchell, Irvine, CA 92714; Fax: 714-474-3953.** EOE.

Medtronic

PENNSTATE



College of Medicine
University Hospital • Children's Hospital
The Milton S. Hershey Medical Center

BIOMEDICAL ENGINEERING FACULTY POSITION

The Biomedical Engineering Institute at the Pennsylvania State University, College of Medicine, in Hershey, Pennsylvania, is seeking applicants to fill a tenure track position at the assistant/associate professor level. The successful candidate will have the opportunity to be part of a team being assembled at Penn State in Hershey and in the Bioengineering Program at University Park. Experience in the broad area of biomaterials and their compatibility with tissues or blood is desirable, however all areas of expertise will be considered.

The candidate must have demonstrated a strong academic record, outstanding potential for independent research, and a commitment to teaching, both undergraduate and graduate students.

An affirmative action/equal opportunity employer. Women and minorities encouraged to apply.

Please send a curriculum vitae including a list of publications, names of at least three references, and an abstract of research and teaching interests by July 1, 1998 to:

**Gerson Rosenberg, Ph.D., Chair, Faculty Search Committee,
Section of Artificial Organs, The Pennsylvania State University
College of Medicine, MC H151, P.O. Box 850 -Drawer-S,
Hershey, PA 17033-0850 <http://webserv.surg.hmc.psu.edu/>**

BURROUGHS WELLCOME FUND

Awards provide \$750,000 to support research linking the laboratory bench and patient bedside.

Open to U.S. and Canadian physician-scientists.

Application deadline for 1999 awards is September 1, 1998.

BWF is an independent private foundation established to advance the medical sciences by supporting research and other scientific and educational activities.

4709 Creekstone Drive, Suite 100
Durham, NC 27703-8472
Tel: (919) 991-5100 Fax: (919) 941-5884
E-mail: info@bwfund.org

RESEARCH FUNDING
FOR PHYSICIAN-SCIENTISTS

CLINICAL SCIENTIST AWARDS IN TRANSLATIONAL RESEARCH

These awards are intended to foster the development and productivity of established independent physician-scientists who will strengthen translational research—the two-way transfer between work at the laboratory bench and clinical medicine. The awards provide \$750,000 over five years (\$150,000 per year). It is anticipated that 10 awards will be made.

Applications must be submitted by accredited degree-granting U.S. or Canadian medical schools on behalf of individual candidates. Candidates from institutions other than medical schools—including schools of veterinary medicine, public health, and pharmacy—will be considered only if they can demonstrate a plan for coordinating with institutions that provide the patient connection essential for translational research.

Candidates must be U.S. or Canadian citizens or permanent residents, have an M.D. or M.D./Ph.D. degree, and hold an appointment or joint appointment in a subspecialty of clinical medicine. (In exceptional circumstances, non-M.D. candidates will be considered if their work is likely to contribute significantly to the clinical enterprise.) Candidates must be tenure-track investigators at the late assistant professor level or the associate professor level, or hold an equivalent tenure-track position, at the time of application.

ADDITIONAL FUNDING OPPORTUNITIES FOR BIOMEDICAL SCIENTISTS

Several BWF programs with upcoming application deadlines may be of interest. Hitchings-Elion Fellowships provide five years of support for postdoctoral scientists to engage in research training in the United Kingdom or the Republic of Ireland and to begin a faculty appointment in the United States or Canada (deadline: August 3). Career Awards in the Biomedical Sciences provide four to six years of support to bridge postdoctoral training and initial faculty appointment (deadline: October 1).

Program information is available on BWF's website at <http://www.bwfund.org>

ANNOUNCEMENT



THE ARA PARSEGHIAN MEDICAL RESEARCH FOUNDATION ANNOUNCES AN UNRESTRICTED R.F.A. FOR INNOVATIVE RESEARCH RELATED TO NIEMANN-PICK DISEASE TYPE C

The Ara Parseghian Medical Research Foundation announces a program initiative directed toward understanding the molecular pathogenesis of Niemann-Pick Type C (NPC) disease in the CNS and/or devising novel therapeutic strategies to combat NPC disease. NPC disease is an autosomal recessive disease characterized by progressive neurological dysfunction and cholesterol accumulation in peripheral tissues. Last year, the gene responsible for NPC disease was identified and NPC-1 mutant mice are now available through Jackson Laboratories. The Foundation will fund meritorious research proposals for up to a two-year period, at a maximum of \$125,000/year, excluding salary support for the P.I. All proposals that are considered relevant to NPC disease will be considered. Targeted areas of emphasis include:

- 1) Cell biology of the NPC-1 gene product. With particular emphasis on examination of: i) proteins that interact directly with NPC-1 ii) NPC-1 regulated metabolic or signaling pathways, and iii) the role that NPC-1 plays in regulating intracellular sterol (including cholesterol) transport.
- 2) Neurobiology of NPC-1 and NPC Disease. With particular emphasis on examination of: i) the function of NPC-1 in the neuron, ii) the subcellular location of NPC-1 in neurons and glia, iii) the role that programmed cell death plays (if any) in the pathogenesis of NPC disease, and iv) the capacity of transgenes encoding NPC-1 under the transcriptional control of promoters that direct expression to discrete regions of the brain to rescue the phenotype of NPC-1 mutant mice.
- 3) Developmental biology of the NPC-1 gene and protein. With particular emphasis on examining the function of NPC-1 homologues in other species including yeast, *Drosophila*, *C. elegans*, and *Xenopus laevis*.
- 4) Isolation of the NPC-2 gene.

The application deadline is October 1, 1998, with funding to begin January 1, 1999. For information and application forms, please contact: **Grants Administrator, The Ara Parseghian Medical Research Foundation, 1760 East River Road, Suite 115, Tucson, AZ 85718. Telephone 520-577-5106; Fax: 520-577-5212.**

SCIOS INC., a biopharmaceutical company engaged in the discovery, development, manufacture and commercialization of novel human therapeutics, maintains a proprietary research and development focus on cardiorenal disorders.

POST-DOCTORAL FELLOW New Cardiorenal Research

We currently seek an experienced Post-Doctoral Fellow to study novel genes related to cardiovascular disease. The ideal candidate will have a recent PhD in Molecular Biology or a related field and experience in the molecular biology laboratory, including broad technical skills in the areas of gene cloning and characterization. A strong grasp of PCR methodologies is highly desired. Job Code: 98-0155

RESEARCH ASSOCIATE Cardiorenal Research

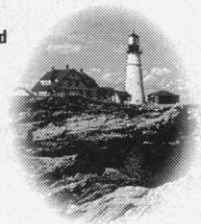
You will purify research quantities of proteins required by various project teams within the Cardiorenal focus area, in addition to handling the characterization of proteins as to purity and native structure. Successful candidates have a BS or MS in Biochemistry or a related discipline and 1-2 years experience devoted entirely to the purification and characterization of proteins. Preference will be given to candidates with industrial experience and/or competence in advance protein characterization. Good communication skills are a must. Job Code: 98-0185

Competitive salaries, a superior benefits package, and a very dynamic environment support the SCIOS team. Please respond to: SCIOS, Human Resources, Job Code: _____, 2450 Bayshore Parkway, Mountain View, CA 94043; FAX to 650/962-5966; or email jobs@sciosinc.com. For more information see our website: www.sciosinc.com. EOE.

scios

JOIN US FOR THE FUTURE

Maine Medical Center is a 598-bed tertiary care and teaching institution with a multi-state referral base, located in Portland, Maine. This New England city has one of the country's most picturesque coastlines. It offers an exciting waterfront area, countless recreational activities and a wealth of cultural attractions. As the largest city in the state, Portland is exceptionally diverse and always exciting.



POSTDOCTORAL POSITIONS

Center for Molecular Medicine Maine Medical Center Research Institute

Several postdoctoral positions are available to participate in research programs focused on understanding novel secretion pathways for signal peptide-less proteins, signal transduction pathways regulated by growth factors, cytokines and cell fate determinants, molecular mechanisms of tissue/organ repair and the molecular genetics of human bone development and neoplasia. Applicants with experience in cell biology, biochemistry and molecular biology are encouraged to apply. Salary will be commensurate with experience.

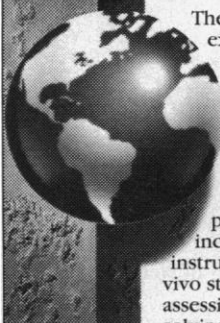
Interested individuals should send a current curriculum vitae and three letters of reference to: Dr. Volkhard Lindner, Search Committee Chair, Center for Molecular Medicine, Maine Medical Center Research Institute, 125 John Roberts Road, Suite #12, South Portland, ME 04106. We are an equal opportunity employer strengthened by the diversity of our professional community.



Maine Medical Center
The Trusted Choice
The MaineHealth Family
An Affirmative Action Employer.

Research Scientist, B.S./M.S. Pharmacology

Wyeth-Ayerst Research, a major division of Fortune 100 American Home Products Corporation, has the following opportunity at its research facility in Princeton, New Jersey.



The selected candidate will plan and conduct experimental studies supporting discovery research related to therapeutic agents for stroke. The data generated are used to support pre-clinical and clinical data drug development programs.

The position requirements include a B.S. or M.S. in Pharmacology, Biology, or related discipline. CNS pharmacology experience is preferred. Additional requirements should include hands-on experience with surgical/instrumentation techniques, familiarity with in vivo stroke models, cytochemical methods of assessing tissue injury, and technical problem-solving skills. Knowledge of in vitro techniques would be an asset. This position requires good speaking and writing skills and the ability to work in a team environment.

Wyeth-Ayerst offers a competitive salary and benefits package along with one of the best employee stock option award programs in the pharmaceutical industry. Please send your resume with salary requirements to: Wyeth-Ayerst Research, Human Resources Dept., Position #OPSCI-2720, P.O. Box 7886, Philadelphia, PA 19101-7886, or fax to (610) 989-4854. E-mail: jobs@RAMAIL1.wyeth.com (ASCII format, no attachments, subject: resume). Principals Only. Equal Opportunity Employer, M/F/D/V.



**WYETH
AYERST**

A VARIETY OF PEOPLE SHARING ONE COMMON GOAL...TO HELP SAVE LIVES

Immunex Corporation is a biopharmaceutical company focused on research, development and marketing of ground-breaking treatments in cancer and immune disorders. We are seeking qualified candidate for the following position in the Biology Department.

STAFF SCIENTIST IN ASTHMA/ALLERGY RESEARCH

The research program will focus on allergy/asthma and other lung inflammatory diseases, with a particular emphasis on the role of cytokines, chemokines, and other immunoregulatory molecules in these disease processes. This individual will establish and refine preclinical models for use in assessing biological effects of potential therapeutic agents on lung function and immunological aspects of allergy/asthma.

The successful candidate will have at least 3 years of relevant postdoctoral experience, a thorough theoretical background in pulmonary disease and cytokine immunobiology, as well as experience in pulmonary drug delivery and lung pharmacodynamics.

Immunex — there's nothing "traditional" about us! We offer award winning benefits and highly competitive compensation packages. All of which takes place in one of the most dynamic, picturesque cities in the country...Seattle! For an uncommon career experience, please submit a resume (Immunex utilizes scanning technology) specifying Job # 98-0439 to: Immunex Corporation, Attn: Human Resources, 51 University Street, Seattle, WA 98101. Jobline (206) 389-4060 or FAX: (206) 621-1399. Visit our website at www.immunex.com. EOE.

IMMUNEX®

THE CURE FOR THE COMMON COMPANY



Eli Lilly and Company

SENIOR DISCOVERY SCIENTIST

Elanco Animal Health, a Division of Eli Lilly and Company, invites applications for a Senior Scientist within Animal Science Discovery Research.

This individual will be responsible for developing and leading an innovative research program and be part of an interdisciplinary team studying:

- Regulation of Growth Efficiency
- Improved Carcass Yield and Meat Quality
- Control of Protein and Lipid Metabolism
- Regulation of Embryonic Development

The successful candidate will use creative/novel approaches for identification of biological targets amenable for high-throughput screening, develop secondary assays to support drug discovery efforts, and provide program leadership.

The candidate must have knowledge and experience in basic research techniques demonstrating broad based expertise in a wide array of techniques utilizing recent advances in biochemistry, molecular biology, and cell biology, as well as traditional assays. An understanding of avian physiology is desirable.

The successful candidate should have excellent leadership, organizational, supervisory, and multi-tasking skills. The applicant must have the ability to interact and communicate effectively with other scientists to produce results in a highly collaborative, interdependent, team-oriented research environment.

Candidates must have a Ph.D. and at least two years of postdoctoral training or equivalent experience. A strong record of scientific contributions and achievements, and evidence of scientific leadership must be demonstrated through scientific publications.

In addition to competitive salaries and benefits, Elanco provides excellent opportunities for continued growth through in-house seminars and off-site programs. Qualified applicants should submit a letter of application along with their C.V., official transcript and names of three references prior to June 26, 1998 to: **Ms. Patricia A. Balko, Senior Personnel Representative, Human Resources Elanco Animal Health, A Division of Eli Lilly and Company, PO Box 708, Greenfield, IN 46140.**

Eli Lilly and Company is an Affirmative Action/Equal Opportunity Employer dedicated to the strength diversity brings to the work place. **For more information about Elanco/Lilly, please access our web site at www.Lilly.com.**

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ANIMAL HEALTH

Helping the World Produce Safe,
Abundant, Affordable, Quality Food

THE J. DAVID GLADSTONE INSTITUTES

University of California, San Francisco
San Francisco General Hospital



Postdoctoral position available in the laboratory of **Dr. Bruce Conklin** to study G protein signaling in cardiac and neural tissues of transgenic mice. Experience in either receptor pharmacology, biochemistry, bioinformatics, computer programming, and/or transgenic animals required. Candidate should possess an Ph.D., M.D., or both. Job #C98-019.

Postdoctoral position available in the laboratory of **Dr. Tom Innerarity**. Studies of the mechanism of this process will include *in vitro* analysis combined with physiological investigations using transgenic and gene targeted animals. Candidates should possess an Ph.D. or M.D.; a strong background in biochemistry and molecular biology preferred. Job #C98-024.

Postdoctoral position available in the laboratory of **Dr. Tom Innerarity**. Study the mechanism of atherosclerosis using transgenic and gene targeted animals. Candidates should possess a Ph.D. or M.D.; a strong background in biochemistry and molecular biology preferred. Job #C98-023.

Interested candidates, please send C.V. and references to: Job #_____, The Gladstone Institutes, P.O. Box 419100, San Francisco, CA 94141. Fax (415) 431-4039.
Email: hr@gladstone.ucsf.edu For more information about the Gladstone Institutes, please visit our website: <http://gladstone.ucsf.edu>

Equal Opportunity/Affirmative Action Employer



Tenure-Track Faculty Positions in Genetics and Developmental Biology University of Connecticut School of Medicine

The newly created Department of Genetics and Developmental Biology at the University of Connecticut School of Medicine is seeking highly qualified individuals with an outstanding background in developmental genetics of a variety of systems. Areas of interest include, but are not limited to, morphogenesis and patterning, genetic control of cell growth and differentiation, nuclear structure and function, DNA replication, recombination and repair, and genetic and epigenetic mechanisms of gene regulation.

Applications are now invited for four such positions at the Assistant, Associate, or Full Professor level. Two additional positions are available for individuals with expertise in transgenic and gene targeting technologies. Departmental faculty will enjoy superb resources including generous start-up funds and space in a new research building that will be available for occupancy in December 1998. There are state-of-the-art core facilities for mouse transgenics and ES cell manipulation, nucleic acid sequencing, flow cytometry, confocal microscopy, and fluorescence imaging. Faculty will be expected to establish independent and innovative research programs that will attract extramural funding and to actively contribute to a rich scientific environment.

Candidates should apply by submitting a curriculum vitae, five selected publications, and names of three references by September 30, 1998, to:

Marc Lalande, Ph.D., Professor and Chairman, Department of Genetics and Developmental Biology, The University of Connecticut Health Center, School of Medicine, 263 Farmington Avenue, Farmington, CT 06030-1920.

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PENNSTATE



College of Medicine

POSTDOCTORAL FELLOW POSITIONS G PROTEIN SIGNALING, REGULATION AND FUNCTION

Two postdoctoral positions are available in the Laboratory of Dr. Janet D. Robishaw to study the regulation or function of diverse G protein γ subunits (see J. Biol. Chem. 270, 21765, 1995; and J. Biol. Chem. 272, 26040, 1997). For studies on gene regulation, the successful candidate will have experience in promoter analysis of G protein γ subunits that have been implicated in tumor progression of metastasis, with emphasis on use of transgenic animals. For studies on function, the successful candidate will have experience in molecular biology and/or signal transduction of G protein $\beta\gamma$ subunits, with emphasis on use of anti-sense or ribozyme approaches.

An additional position is available to study the G protein-coupled receptor signaling pathways controlling growth in rat cardiac myocytes (see Eur. J. Pharm. 339, 77, 1997). The successful candidate will have experience in molecular biology and/or signal transduction of G protein-coupled receptors, including the preparation and culture of rat cardiac myocytes.

The Weis Center for Research in Danville, PA is part of the Penn State College of Medicine, providing modern research facilities for 90 faculty and research personnel. The center is located on the campus of Penn State Geisinger Health System in Danville, PA. This is a pleasant semi-rural living environment with convenient access to the major metropolitan areas of New York and Baltimore.

Interested individuals should send their curriculum vitae and the names of three references to:

Mrs. Barbara A. Brown
Administrative Assistant
Henry Hood Research Program (JDR)
Sigfried and Janet Weis Center for Research
100 North Academy Avenue
Box SCI
Danville, PA 17822-2601

For your health, the Weis Center for Research of The Pennsylvania State University is a smoke-free campus. AA/EOE



**REACH NEW
HEIGHTS OF
RESEARCH AT
PARKE-DAVIS**

POSTDOCTORAL FELLOW

Parke-Davis Pharmaceutical Research, a division of Warner-Lambert headquartered in **Ann Arbor, MI**, is a world-class company focused on technological advances to benefit the world.

The selected individual will handle a proteomics-based approach towards the identification and characterization of cardiac protein expression profiles in myocardial disease states. Various state-of-the-art 'proteomic' technologies will be applied such as large-scale 2-D electrophoresis, analytical protein identification techniques including mass spectroscopy and bioinformatics to establish protein databases for cross-correlation with available protein/genome banks. In addition, studies on the regulation of novel cardiac proteins by post-translational mechanisms will be a significant focus. This project will be an integral component of a broader initiative into proteomics within Parke-Davis and staffed by internationally recognized scientists.

A Ph.D. in Physiology, Biochemistry, Cell Biology or related fields is required. An established research record along with expectation of further peer-reviewed scientific communication is essential. Excellent interpersonal skills, innovation/creativity and the ability to work in a team environment are essential. Prior experience with protein biochemistry, 2-DE gels, mass spectroscopy and sequencing are desirable.

We offer an attractive compensation package and a positive environment that encourages continuous growth and success. Qualified candidates please mail, fax or e-mail your resume*, indicating **Job Code CJM-985309, Parke-Davis Resume Processing Center, P.O. Box 92242, Los Angeles, CA 90009-2242. Fax: (310) 337-3367. E-mail: parke-davis@isearch.com**

Equal opportunity in action.
Smoke-free work environment.

*Please submit resume on laser-quality white paper, with legible 10 point or larger type, and avoid boldface, italics, borders, etc.



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Phased Innovation Awards for Technology Development

Applications are solicited for the development of:

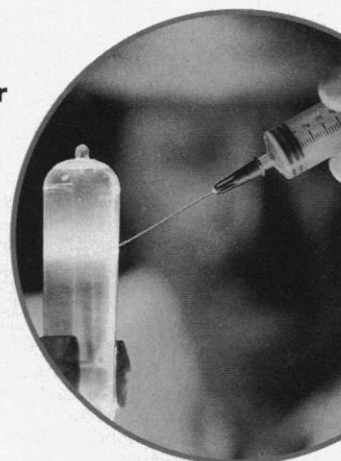
Innovative Technologies for the Molecular Analysis of Cancer

The program features:

- Rapid review of applications
- Expedited transition of successful technology research to an expanded development phase
- Flexible budget levels

Technologies of interest include those that are suitable for *in vitro*, *in situ*, or *in vivo* (e.g. imaging) analysis of:

- Alterations and instabilities in genomic DNA
- Expression of genes and gene products
- Cellular localization, post-translational modification, and function of proteins
- Major signal transduction networks involved in cancer



For complete information on this new program: Visit our Web site or call us at 301/496-1550

www.nih.gov/grants/guide/pa-files/PA-98-067.html

Small businesses are encouraged to consider a parallel announcement at: www.nih.gov/grants/guide/pa-files/PA-98-066.html

PENNSTATE



University
Park

PROFESSOR AND HEAD DEPARTMENT OF POULTRY SCIENCE COLLEGE OF AGRICULTURAL SCIENCES

Information about the department can be found by visiting the web page at:
<http://www.psu.edu/dept/poultry/index.htm>

Responsibilities: Leadership and administration of programs in resident education, research, and extension; administrative responsibility for academic affairs, departmental personnel, physical facilities, and budgets. Provide effective leadership and coordination of relations within the College and University as well as serve as a liaison with the poultry industry, government, and Pennsylvania citizenry. Promote development and retention of quality faculty, staff, and students in an interdisciplinary environment. Participate in scholarly activities involving one of the missions of the University.

Qualifications: Candidates must have a Ph.D. degree (or an equivalent academic degree) in Poultry Science or a closely related field. Eligibility for tenured rank of full professor is required. A strong commitment to scholarly achievement and educational excellence, as well as experience in or in-depth knowledge of the teaching, research, and extension/outreach missions of a land-grant university, are essential. Excellent leadership, administrative, and communication skills, as well as interest and/or experience in working with the poultry industry, are also essential. Administrative experience in the land-grant system is highly desirable.

Closing Date: Applications will be accepted until August 15, 1998, or until a suitable candidate is found.

Application: Nominations and inquiries are invited. Qualified persons should send a letter of application; complete curriculum vitae; a statement of personal leadership philosophy; and the names, addresses, telephone numbers, and e-mail addresses (if available) of five persons who may be contacted for letters of reference.

Send Applications and Nominations to: **Dr. Roland M. Leach, Chair, Advisory Search Committee, Department of Poultry Science, The Pennsylvania State University, 212 Henning Building, Dept. SCI, University Park, PA 16802-3501, Phone: (814) 865-5082, Fax: (814) 865-5691, E-mail: lnr@psu.edu**

An Affirmative Action/Equal Opportunity Employer.
Women and Minorities Encouraged to Apply.

PENNSTATE



College of Medicine

POSTDOCTORAL FELLOW AND ASSISTANT PROFESSOR CARDIAC CELL GROWTH COLLEGE OF MEDICINE

Positions available to investigate the molecular control of cardiac cellular growth in the Laboratory of Dr. Kenneth M. Baker. The successful candidate should have a Ph.D. and/or M.D., and a strong background in molecular and cellular biology and biochemistry with commensurate experience.

The Weis Center for Research in Danville, PA is part of the Penn State College of Medicine, and provides modern research facilities. This location is a pleasant, semi-rural living environment, with convenient access to the metropolitan areas of New York, Baltimore, and Washington, D.C.

Interested individuals should send their curriculum vitae and the names of three references to:

**Mrs. Barbara A. Brown
Administrative Assistant
Henry Hood Research Program (KMB)
Sigfried and Janet Weis Center for Research
100 North Academy Avenue
Danville, PA 17822-2601**

For your health, the Weis Center for Research of The Pennsylvania State University is a smoke-free campus. AA/EOE

PEW

Latin American
FELLOWS
PROGRAM in the
BIOMEDICAL
S·C·I·E·N·C·E·S

A Program Sponsored by The Pew Charitable Trusts to support young scientists from Latin America for post-doctoral training in the United States. The Program is intended to provide such individuals with an opportunity to further their scientific knowledge, promote scientific exchange and collaboration between investigators in the U.S. and Latin America, and advance basic scientific research in Latin America. Ten Fellows will be selected in 1999. An award of \$50,000 will be provided as a salary stipend for the fellow during the period of training (\$25,000 per year for 2 years) and will be administered by the sponsoring U.S. institution. The sponsoring institution is expected to supplement the

salary stipend with at least \$5,000 each year and provide medical benefits for the fellow. Following the two-year fellowship, the Program will issue the sponsoring institution an additional \$35,000 award for the fellow to purchase equipment and supplies to establish a laboratory in his or her home country.

Applicants must have held a Ph.D. and/or M.D. degrees, or equivalent, for no more than five years as of October 1, 1998. Strong preference is given to applicants who have not had any previous training outside of Latin America. Applicants are not required to have a commitment of a position and laboratory space after the fellowship. However, the application requires a written statement of intent to return to Latin America. Fellows must have a confirmed position and laboratory space in Latin America by the end of the fellowship in order to obtain the \$35,000 portion of the award.

Fellows will be selected on the basis of their promise as outstanding investigators, as well as the scientific merit of their research proposal, their record of training and how well their interests coincide with the laboratory of their sponsor in the United States. Assistance with the identification of an appropriate laboratory and sponsor in the United States is available by contacting Silvia Montano de Jimenez, Program Coordinator at montano@itsa.ucsf.edu before August 15, 1998.

The program will accept applications from Mexico, Central and South America. Applications may be obtained by the Regional Committee chairperson in your country listed here or from our website at <http://futurehealth.ucsf.edu/pewlatin.html>. The application deadline is October 1, 1998. Winners will be notified in April 1999 and the fellowship should begin no later than August 1999.

APPLICATION DEADLINE IS OCTOBER 1, 1998

ARGENTINA:

Israel Algranati,
Fundación Campomar,
Av. Patricia Argentinas 435,
1405 Buenos Aires, Argentina
Tel: 863-4018 Fax: 865-2246
e-mail: algra@iris.iib.uba.ar

BRASIL:

Carlos E. Rocha Miranda,
Academia Brasileira de Ciencias,
Rua Anfilofio de Carvalho, 29, 3º Andar, 20030-060
Rio de Janeiro, RJ - Brasil
Tel: 220-4794 Fax: 240-4695
e-mail: cerm@abc.org.br

CHILE:

Manuel Kukuljan, Ph.D.
Universidad de Chile
Departamento de Fisiología y Biofísica
Casilla 70005 Santiago 7 Chile
Tel: 2-678-6310 Fax: 2-777-6916
e-mail: kukuljan@bitmed.med.uchile.cl

MEXICO:

Hugo Aréchiga,
UNAM, Ciudad Universitaria
04510 Mexico, D.F.
Tel: 622-0725 Fax: 550-8859
e-mail: arechiga@servidor.unam.mx

ALL OTHER COUNTRIES:

Silvia Montano de Jimenez
The Pew Latin American Fellows Program,
1388 Sutter Street Suite 805,
San Francisco, CA 94109
Tel: 415-476-5116 Fax: 415-476-4113
e-mail: montano@itsa.itsa.ucsf.edu

POSITIONS OPEN

GLOBAL CHANGE BIOLOGIST

The Department of Biological Sciences at the University of Illinois at Chicago seeks applications for a tenure-track ASSISTANT PROFESSOR position in ecological, evolutionary, or biogeochemical responses to global change. Preference will be given to individuals with post-doctoral experience, demonstrated research productivity, and compatibility with existing research in the Department. Candidates are expected to develop a strong, externally funded research program, and to contribute to teaching at the undergraduate and graduate levels. Salary and start-up funds are competitive. Submit statements of teaching and research interests, curriculum vitae, reprints, and have three letters of recommendation sent to: Dr. Lon Kaufman, Acting Head, Department of Biological Sciences, University of Illinois at Chicago, 845 West Taylor, m/c 066 Chicago, IL 60607. Review of applications will begin September 1, 1998, and continue until suitable candidates are found. Starting date is negotiable. For more information about the Department and faculty, visit the Department's website: <http://www.bios.uic.edu>. The University of Illinois at Chicago is an Equal Opportunity/Affirmative Action Employer, and encourages applications from women and minority individuals.

The University of Alabama at Birmingham (UAB) Department of Oral and Maxillofacial Surgery School of Dentistry is seeking a RESEARCH ANATOMIST at the ASSISTANT PROFESSOR level. Research in surgical anatomy of craniofacial, orthognathic, cleft lip/palate, implants, traumatology, cosmetics, and upper airway disorders are current topics of interest. In addition, this position would direct clinical research for graduate students in oral and maxillofacial surgery. Joint appointment in the School of Dentistry and Basic Science Department is possible. Preference will be given to applicants whose research interests complement existing strengths and interests of the department. Applications should include a curriculum vitae, a statement of research interests, article reprints, and three letters of recommendation to be forwarded to: Chair, Department of Oral and Maxillofacial Surgery, University of Alabama School of Dentistry, 1919 7th Avenue South, Birmingham, AL 35294-0007. UAB is an Equal Employment Opportunity/Affirmative Action Employer.

POSITIONS OPEN



ENDOWED CHAIR PROFESSORSHIP IN BIOINFORMATICS

The School of Biomedical Engineering, Science, and Health Systems at Drexel University and the Coriell Institute for Medical Research invite nominations and applications for the newly established endowed Calhoun/Coriell Chair Professorship in Bioinformatics. The successful candidate will be a visionary and energetic leader with an outstanding record of research and academic accomplishments in bioinformatics and will hold a senior faculty position both at Drexel University and the Coriell Institute. s/he will be expected to establish joint research and educational initiatives in bioinformatics. Preference will be given to candidates who take a systems view of complex genetic behavior with the aim of developing a new understanding of the impact of defects on human health. Send nominations and applications to: Banu Onaral, Director, School of Biomedical Engineering, Science, and Health Systems, Drexel University, 3141 Chestnut Street, Philadelphia, PA 19104. E-mail: onaral@cbis.ece.drexel.edu. For additional information, visit our website: www.biomed.drexel.edu. Drexel University and the Coriell Institute are Equal Opportunity/Affirmative Action Employers.

Keck Graduate Institute of Applied Life Sciences, founded in 1997 as a member of the Claremont Colleges consortium in California, is recruiting an innovative and interdisciplinary FOUNDED FACULTY. Fields of particular interest include bioinstrumentation, biochemical process engineering, and bioinformatics. Further information at website: www.kgi.edu. Contact: Bonnie Busenberg, 1263 North Dartmouth, Claremont, CA 91711. Telephone: 909-607-7853; e-mail: bonnie_busenber@kgi.edu.

POSITIONS OPEN

UNIVERSITY OF FLORIDA

The Division of Hematology/Oncology in the College of Medicine, Department of Medicine seeks to fill the PRICE EMINENT SCHOLAR CHAIR OF BASIC SCIENCE. We are seeking to fill this tenure-track position with a scientist, M.D., Ph.D., or M.D.-Ph.D., with experience as a Cell Biologist to conduct basic research in one or more areas of hematopoiesis, cytokine regulation and hematopoietic progenitor cells, interaction of stem cells and bone marrow stroma, differentiation between normal and malignant hematopoietic stem cells, purification of hematopoietic stem cells, purification of hematopoietic progenitor cells of different lineages, and the characterization of primitive hematopoietic progenitors of fetal origin, adult bone marrow, and peripheral blood. Salary and fringes negotiable and commensurate with experience. Recruiting deadline: June 15, 1998. Anticipated starting date September 1, 1998. Applicants should send a letter of interest and a copy of their curriculum vitae to: John R. Wingard, M.D., Chairman, Price Eminent Scholar, Chairman Search Committee, Professor of Medicine, Director Bone Marrow Transplant Program, University of Florida, Box 100277, JHMC, Gainesville, FL 32610-0277. An Equal Employment/Affirmative Action Employer.

CATHOLIC UNIVERSITY OF CHILE FACULTY OF BIOLOGICAL SCIENCES Three Research and Teaching Positions Open in Molecular Biology

The Faculty offers one tenured ASSOCIATE PROFESSORSHIP and two tenure-track ASSISTANT PROFESSORSHIPS. Expertises sought are regulation of genetic expression in animal cells for the Associate Professor, control of genetic expression in neurobiology for one Assistant Professor, and control of genetic expression during development for another. A Ph.D. degree, postdoctoral experience, publications in mainstream journals, and fluency in Spanish are required. A curriculum vitae, selected reprints, statement of research and teaching interests, and three confidential letters of reference should be mailed to: Dr. Rodrigo Iturriaga, P.O. Box 114-D, Santiago, Chile. E-mail: riturria@genes.bio.puc.cl. Review of applications: August 31, 1998.

Make an
IMPACT
every day!

Director of Microbiology

You will lead our team of microbiologists to develop antimicrobial coatings for the consumer market. You will perfect or develop tests and protocols and structure our lab operations. Ability to thrive in a limited resource environment and think out of the box are essential skills. Strong leadership skills, 5-10 years experience, and a Ph.D. in Microbiology or a related science are required.

Microbiologist, Product Development

We have an opportunity for a microbiologist with 5+ years' practical experience to design tests and develop protocols for antimicrobial agents. You will interface with other microbiologists and regulatory agencies for product registration requirements. You must have knowledge of bacterial cell culture techniques and be familiar with bacterial contamination and prevention methods. Involvement with regulatory submissions and outstanding communication skills are important. MS or higher in Microbiology or a life science is preferred.

Microbiologist

Working with other microbiologists, you will implement new test protocols, collect data and support lab activities. Must be familiar with bacteria, fungus, cell cultures and serology. The ability to work in a team environment and solve problems independently are important skills in this position. A BS in any life science is required. A BS in Microbiology is preferred.

Process Engineer

In this position, you will engineer and develop methods to apply our proprietary coating technology. You will direct our bench to pre-pilot small-scale manufacturing operation as well as interface with contracted chemical operations. Strong organizational and communication skills are required. This position requires 5-10 years experience in small scale coating technology as well as a Bachelor's Degree in Engineering or Chemistry. BS or higher in Chemical Engineering is a strong plus.

Analytical Chemist

Our advanced projects team has an opening for someone with 5+ years of experience in instrumentation analysis, wet methods of development, and spectroscopic technologies. You will develop and implement critical analytical experiments. A background in chemistry in support of formulation development is critical. Excellent planning and organizing skills and the ability to meet critical deadlines are musts. A Ph.D. in Analytical Chemistry is preferred.

Applications Chemist

In this position, you will help drive products to market by assisting our clients in developing uses for our coating technology. You must be a creative problem solver and enjoy working with others. 3-5 years experience in formulations, surface modifications and coatings are important. You must have an MS or Ph.D. in Chemistry or Polymer Science.

Chemist

We need an individual to prepare, set up and execute experiments. You will perform analytical evaluations of assays and experimental procedures. This position requires 3-5 years bench experience. Knowledge in a variety of chromatographic techniques and instrumental methods as applied to chemical characterization, preferably in polymers, is preferred. Good understanding of analytical technique and the ability to solve problems independently are required. BS or higher in Chemistry or other physical sciences is required.

Competitive salaries, employee equity participation and a complete benefits package. For immediate consideration, mail or fax us your confidential resume.



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GLOBAL OPPORTUNITIES



As the oldest tertiary education institution in Hong Kong, the University of Hong Kong has attained unparalleled achievements since 1911 in Hong Kong and the region by drawing on the great cultural traditions of China and the West. The University is a major research institution with nine major faculties and 100+ departments and sub-divisions of studies and learning, and a full-time and part-time postgraduate and undergraduate student body of almost 15,000, including 1,900 research students. Our firm commitment to research excellence and internationalisation has established us as one of the top universities in the Region. We are firmly committed to our vision of globalisation and enhancing our research excellence.

Assistant Professor in Chemistry

Applications are invited for appointment as Assistant Professor in the Department of Chemistry (Ref.: RF-97/98-85) tenable from 1 September 1998 or as soon as possible thereafter. The appointment will initially be made on a three-year fixed-term basis, with a possibility of renewal.

The Department of Chemistry's mission is to provide high quality undergraduate and postgraduate teaching and to conduct top quality research in chemistry and related disciplines. The Department is therefore interested in applicants who have a PhD degree with strong background in Inorganic and Organometallic Chemistry. Preference will be given to applicants with research interests in Physical Inorganic Chemistry, Bioinorganic Chemistry, and/or Material Chemistry. The appointee will be responsible for (a) teaching Inorganic Chemistry and General Chemistry to both undergraduates and postgraduates, and (b) conducting an independent programme of research.

Annual salary [attracting 15% (taxable) terminal gratuity] for an Assistant Professor (in the grade of Lecturer) is on an 11-point scale, with starting salary depending on qualifications and experience: HK\$522,780 - HK\$873,360* (approx. US\$66,384 - US\$110,940; US dollar equivalents as at 15 May 1998). *An appointee with an annual salary at HK\$698,520 (approx. US\$88,704) or above may be considered for the award of the title of Associate Professor.

At current rates, salaries tax will not exceed 15% of gross income. The appointment carries leave, medical and dental benefits, an allowance for children's education in Hong Kong, and, in most cases, a financial subsidy for private tenancy may also be provided at a charge of a percentage of salary, currently 7.5%.

Further particulars and application forms can be obtained on WWW at <http://www.hku.hk>; or from the Appointments Unit, Registry, The University of Hong Kong, Hong Kong (Fax (852) 2540 6735 or 2559 2058; E-mail: APPTUNIT@REG.HKU.HK).
Closes 3 July 1998.

The University is an equal opportunity employer and is working towards a smoke-free environment

POSITIONS OPEN

STRUCTURAL MOLECULAR BIOLOGIST/BIOCHEMIST University of Illinois at Chicago

The Laboratory for Molecular Biology (LMB) of the Department of Biological Sciences at the University of Illinois at Chicago (UIC) invites applicants at the level of **ASSISTANT to FULL PROFESSOR** for a faculty position beginning fall semester 1999.

Candidates with a research program addressing biological problems from a structural perspective are sought. Successful candidates will be expected to pursue a vigorous independent research program and to contribute to the department's undergraduate and graduate teaching effort. New X-ray crystallography and NMR facilities have recently been installed on campus. LMB facilities are located in the new Molecular Biology Research Building, which also houses Molecular Biologists from other departments.

Applications should include a curriculum vitae and a summary of research plans. In addition, candidates should arrange to have at least three letters of recommendation forwarded to the search committee. For fullest consideration, applications should be received by August 1, 1998. Send application materials and letters of reference to:

Dr. F. Marion Hulett, Chairperson
Search Committee for Structural Biologist
Laboratory for Molecular Biology (m/c 567)
University of Illinois at Chicago
900 South Ashland Avenue
Chicago, IL 60607

UIC is an Affirmative Action/Equal Employment Opportunity Employer.

BIOINFORMATICS BOSTON UNIVERSITY

The Department of Biomedical Engineering of Boston University is seeking a faculty member who will play a leading role in the evolution of a new bioinformatics program. Appointment will be at the level of **ASSISTANT PROFESSOR** of biomedical engineering with the potential for a joint appointment in other departments. A successful candidate will be expected to develop a strong research program, but duties will also include course development and teaching. Candidates should have a doctoral degree in biomedical engineering. A doctoral degree in applied mathematics, computer science, computational chemistry, or molecular biology is also acceptable if the candidate has an undergraduate degree in engineering.

Application packages must include five copies of a current curriculum vitae and five copies of a single recent publication. We also require five copies of a short letter describing the significance of the candidate's prior research and the intended direction of their future research. These documents should be mailed to the following address:

Micah Dembo
Chair, Bioinformatics Search Committee
Boston University
Department of Biomedical Engineering
44 Cummings Street
Boston, MA 02215-2407 USA

The deadline for receipt of applications will be August 15, 1998.

Boston University is an Equal Opportunity Employer.

FACULTY POSITION in animal virology. The Department of Veterinary Pathobiology, University of Minnesota, wishes to fill a full-time tenure-track **ASSISTANT PROFESSOR** position in the area of animal virology with emphasis on cellular and molecular mechanisms of avian viral diseases. Candidates will be expected to establish and maintain an independent, externally funded research program, train pre- and postdoctoral scientists, and collaborate with other faculty in the University. Candidates must have a Ph.D., training in animal virology, and postdoctoral experience in cellular and molecular virology. A D.V.M. or equivalent degree is desirable. Send a curriculum vitae, statement of research interests, and names, addresses, and telephone numbers of three persons who would provide letters of reference. Completed applications will be reviewed upon receipt and accepted until August 14, 1998. Send applications to: Dr. Jagdev M. Sharma, Search Committee Chair, Department of Veterinary Pathobiology, College of Veterinary Medicine, University of Minnesota, 1971 Commonwealth Avenue, St. Paul, MN 55108. E-mail: pkircher@tc.umn.edu. *The University of Minnesota is an Equal Opportunity Educator and Employer.*

POSITIONS OPEN

FACULTY APPOINTMENTS IMMUNOLOGY AND INFECTIOUS DISEASE at the Trudeau Institute Saranac Lake, New York

The Trudeau Institute is recruiting several new faculty in the areas of immunity to infectious disease and basic immunology, including studies in murine models of infectious disease; virology; cellular and molecular studies of host-pathogen interactions; mouse molecular genetics; signal transduction; chemokines; and lymphocyte adhesion, trafficking, and homing.

The Institute is building new laboratory space for this expansion. The Institute offers competitive start-up packages, affordable on-campus housing, excellent laboratory space, extensive core facilities, including an affordable mouse facility, and the opportunity to collaborate with faculty working at the interface between basic immunology and infectious disease.

Please send applications or inquiries for further information to: Faculty Search Committee, Trudeau Institute, P.O. Box 59, Saranac Lake, NY 12983. FAX: 518-891-5126; e-mail: dutton@northnet.org; website: trudeauistitute.org.

Applications should be received by July 31, 1998. *The Trudeau Institute is an Equal Opportunity Employer.*

ASSISTANT MEMBER/PROFESSOR INFECTIOUS DISEASE

The Program in Infectious Disease in the Clinical Research Division of the Fred Hutchinson Cancer Research Center (FHCRC) and the University of Washington, Division of Allergy and Infectious Disease invites applications for a faculty position at the Assistant Member/Professor level in viral pathogenesis in immunocompromised hosts with preference being given to those who study HHV-8 or other gamma herpes viruses. M.D. or Ph.D. qualification is required. The announcement results from a new programmatic emphasis on HIV-related malignancies. The individual will be expected to develop independent research programs. Excellent collaborations with scientists in clinical, molecular medicine, and basic sciences at Fred Hutchinson Cancer Research Center and University of Washington are available. Salary dependent on experience, plus excellent benefits. Interested candidates may submit a curriculum vitae, a concise statement of their research plans, and three letters of reference to (open until filled):

Lawrence Corey, M.D.
Head, Program in Infectious Diseases
Fred Hutchinson Cancer Research Center
1100 Fairview Avenue North
P.O. Box 19024, D3-100
Seattle, WA 98109-1024

FHCRC and the University of Washington are building a culturally diverse faculty and strongly encourages applications from female and minority candidates. FHCRC and the University of Washington are Equal Opportunity/Affirmative Action Employers.

RESEARCH ASSISTANT PROFESSOR

The University of Washington School of Medicine, Department of Laboratory Medicine, is seeking applicants for a faculty position in its Virology Division. Candidate must have an M.D. and/or Ph.D. degree with a minimum of three years of postdoctoral experience, demonstrated research experience in the molecular mechanisms involved in hepatitis C virus substantiated by publications, and strong communication skills. Successful candidate will be expected to develop an independently funded research program and to conduct primary and collaborative research projects. Application deadline is July 1, 1998. Applicants should submit a cover letter summarizing research interests and career goals, a current curriculum vitae, and three letters of reference to: Dr. David Gretsch, Research Assistant Professor Search Committee, Department of Laboratory Medicine, Box 357110, University of Washington, Seattle, WA 98195-7100. *The University of Washington is building a culturally diverse faculty and strongly encourages applications from female and minority candidates. The University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

SURGICAL PATHOLOGIST

The Department of Pathology, Immunology, and Laboratory Medicine at the University of Florida College of Medicine invites applications for two faculty positions in surgical pathology. Two non-tenure-track positions are available at the **CLINICAL ASSISTANT/CLINICAL ASSOCIATE PROFESSOR** level. Applicants should have an M.D. degree and be Board-certified in anatomic pathology. The successful applicant will participate in general surgical pathology/autopsy activities but should have expertise in or extra training in musculoskeletal pathology to assist current faculty in supporting the Orthopaedic-Oncology group. Scholarly study and investigation of musculoskeletal diseases is expected. Successful applicant will contribute to medical student education and to the training programs for Housestaff in pathology and the Department of Orthopaedics. Salary is dependent upon training and expertise. Anticipated start date is July 1, 1998. Applicant should send a letter of application outlining interests and a copy of curriculum vitae by June 10, 1998, along with three letters of reference to:

Raymond L. Hackett, M.D.
Professor and Associate Chairman
University of Florida College of Medicine
Department of Pathology, Immunology,
and Laboratory Medicine
Box 100275 JHMHC
Gainesville, FL 32610-0275

Affirmative Action/Equal Opportunity Employer.

FACULTY POSITION in microbiology and molecular genetics. The Department of Microbiology and Molecular Genetics at the University of California, Irvine is seeking applicants for a faculty position at the **ASSISTANT** or **ASSOCIATE PROFESSOR** level, depending upon qualifications. The applicant's previous work should have been judged by peer review to have been scientifically rigorous, and he/she should have been successful in obtaining sufficient funds from peer-reviewed grants (including Postdoctoral Fellowship support for Assistant Professor candidates). We are seeking a faculty member whose research is in one of three broad areas: (1) eukaryotic gene expression: nuclear architecture, transcriptional/posttranscriptional regulation; (2) molecular pathogenesis: molecular genetics of bacterial, viral, fungal, or parasitic infections, including the immune response to infectious agents; functional genetics of human disease; (3) molecular physiology: intracellular signaling pathways, nuclear-cytoplasmic transport. Candidates must have a Ph.D. and/or M.D. The successful candidate will have some teaching responsibilities but will have considerable time available for research and research-related activities. Please send curriculum vitae, summary of research interests, and names of three references to: Dr. Alan L. Goldin, Search Committee Chair, Department of Microbiology and Molecular Genetics, College of Medicine, University of California, Irvine, CA 92697-4025. E-mail: agoldin@uci.edu. *The University of California, Irvine is an Equal Opportunity Employer, committed to excellence through diversity.*

MEDICAL HISTOLOGY FACULTY POSITION

Medical histology. The Department of Biomedical Sciences, Ohio University College of Osteopathic Medicine, invites applications for a full-time tenure-track **ASSISTANT PROFESSOR** position. Primary responsibilities are to teach medical microscopic anatomy and to maintain a viable, independent research program. A Ph.D. or equivalent and postdoctoral research training are required.

Ohio University has 19,000 students, including 2,000 graduate and 400 medical students. The Biomedical Sciences faculty is integrated into the University and directs graduate students (M.S. and Ph.D.) in the Department of Biological Sciences.

Starting date is September of 1998 or January of 1999. The eleven-month salary will be commensurate with experience, and is accompanied by an excellent benefits package. Review of applications will begin on July 1, 1998, but applications will be accepted until the position is filled. Please submit a letter of application, curriculum vitae, statement of teaching and research interests, and three letters of recommendation to: Cheri McFee, Medical Histology Search Committee, Ohio University College of Osteopathic Medicine, 304 Grosvenor Hall, Athens, OH 45701-2979.

Ohio University is an Affirmative Action/Equal Opportunity Employer.



DIRECTOR OF COASTAL RESOURCE MANAGEMENT PH.D. PROGRAM

East Carolina University seeks to fill the position of Director for its new and innovative Ph.D. program in Coastal Resource Management by no later than 1 July 1999. Student enrollment starts August 1999. Students will develop competence in the biological, geological, and social sciences, and they specialize in one of these areas for their research, which will involve applications of science to policy in the coastal zone.

The Director's administrative duties include continued development of the administrative structure and curriculum of the program, and coordination of student and faculty recruitment and retention. The Director will be expected to maintain active research, stimulate research activity in others, foster external funding, and teach overview and specialty courses. The person will hold rank of full Professor in an appropriate academic department.

Qualified applicants are required to have a Ph.D. or other terminal degree and experience with the following: (1) interdisciplinary programs, (2) the applications of science to coastal policy issues, (3) mentoring doctoral students, (4) a strong record of publication and grantsmanship, and (5) good interpersonal skills. Administrative experience preferred. Salary will be commensurate with experience.

A letter of intent, curriculum vitae, statements of philosophy of administration and coastal resources management, and names and addresses of 3 references should be sent to **Dr. Robert R. Christian, Chair of the CRM Search Committee, c/o the Graduate School, 113 Ragsdale Building, East Carolina University, Greenville, NC 27858-4353**. Screening will begin 15 August 1998. *ECU is an Equal Opportunity/Affirmative Action University and accommodates people with disabilities*. Proper documentation of identity and employability required at the time of employment.

Vacancy No. 8617

GLOBAL OPPORTUNITIES



Founded 1905

Faculty Appointments NATIONAL UNIVERSITY OF SINGAPORE DEPARTMENT OF COMPUTATIONAL SCIENCE <http://www.cz3.nus.sg:8100/>

The Department of Computational Science offers interdisciplinary programmes in Computational Chemistry, Computational Mathematics, Computational Physics, and Computational Biology. There is currently a small core of faculty members and several postdoctoral research fellows in the Department. Faculty members from other departments in the Faculty of Science also contribute to the teaching and research in the Department.

Major research areas in the Department include computational statistical and condensed matter physics, nonlinear dynamics and complex systems, scientific visualization, neural computing, computational quantum chemistry and molecular modeling, computational fluid dynamics, geometric modeling, wavelet analysis and applications, signal and image processing. There are strong links between the Department and other national research centres. Ties with other academic institutions and research centres overseas are maintained and the Department is fast gaining international recognition.

Applications are invited for faculty appointments at all levels in any of the following areas:

- Complex Systems
- Computational Biology
- Computational Condensed Matter and Statistical Physics
- Computational Fluid Dynamics
- Geometric Modeling
- Neural Computing
- Scientific Parallel Computations
- Computational Chemistry (molecular modeling, computer-aided drug design)
- Scientific Visualization
- Symbolic Computing

Visiting appointments will also be considered.

Gross annual emoluments range as follows:

Lecturer	S\$58,840–74,800
Senior Lecturer	S\$68,410–144,350
Associate Professor	S\$128,050–177,750
Professor	S\$156,780–211,140
(US\$1.00=S\$1.59 approximately)	

In addition, a 13th month Annual Allowance (of one month's salary) and an Annual Variable Component (of normally 2 month's salary) may be payable at year end, under the flexible wage system, to staff on normal contracts. The commencing salary will depend on the candidate's qualifications, experience, and the level of appointment offered.

Leave and medical benefits will be provided. Depending on the type of contract offered, other benefits may include provident fund benefits or an end-of-contract gratuity, a settling-in allowance, subsidized housing, education allowance for up to three children subject to a maximum of S\$16,425 per annum per child, passage assistance and baggage allowance for the transportation of personal effects to Singapore. Staff members may undertake consultation work, subject to the approval of the University, and retain consultation fees up to a maximum of 60% of their gross annual emoluments in a calendar year.

All academic staff will be given a networked personal computer with access to a Cray supercomputer, UNIX hosts, departmental laser printers, a wide spectrum of software, on-line library catalogue, CD-ROM databases, Video-on Demand, INtv and Internet.

Application forms and further information may be obtained from:

**Faculty Search Committee
Department of Computational Science
National University of Singapore
10 Kent Ridge Crescent
Singapore 119260
Fax: (65)774-6756
E-mail: cscsec@leonis.nus.edu.sg**

*Applications should be submitted by 30 September 1998.
Only shortlisted candidates will be notified.*

POSITIONS OPEN

The Metropolitan Water Reclamation District of Greater Chicago is an independent government agency serving an area that includes the City of Chicago and 124 suburban communities. The District serves a population of 5.1 million people, treats an average of 1.4 billion gallons of wastewater each day, and owns and operates one of the world's largest water reclamation plants, in addition to six other plants and 34 pumping stations. The District's laboratories are recognized nationally and internationally as leaders and innovators in the field of wastewater treatment.

The District will conduct civil service examinations for the following positions:

RESEARCH SCIENTIST I, II, III. The successful applicant will need to have a Master's degree or a Ph.D. in water resource sciences, environmental engineering, sanitary engineering, or environmental sciences from an accredited college or university. Also required for Research Scientist II is three years of research experience in the fields of wastewater and sludge treatment technology. Research Scientist III requires six years of the experience above, of which four years must have involved direct supervision of technical personnel. Related graduate study above the Master's degree may be substituted for the required experience. The annual salary ranges are: Research Scientist I: \$45,882.98 to \$68,292.12; Research Scientist II: \$55,781.70 to \$81,780.92; Research Scientist III: \$61,547.20 to \$89,851.06.

The District offers a competitive salary, outstanding benefits package including medical, dental, pension plan, and excellent career opportunities. If you are seeking a challenging career opportunity, contact the District at:

**Metropolitan Water Reclamation District
of Greater Chicago
Public Service Office
Attn: Research Recruitment
100 East Erie Street
Chicago, IL 60611
Telephone: 312-751-5100
FAX: 312-751-5171**

Gen-Probe, a growing pioneer and leader in DNA probe-based diagnostics, has the following career opportunity:

RESEARCH SCIENTIST

This position requires a Ph.D. in biology, genetics, molecular biology, or related field, with a minimum of one year of applicable research, industrial, or clinical laboratory experience. Proficiency in nucleic acid laboratory techniques and computer analysis is required. Experience in amplification and detection technologies, particularly with RNA targets, is highly desirable. Prior research or clinical experience in the field of oncology is mandatory.

Responsibilities include the research and development of nucleic acid-based assays for the diagnosis and monitoring of cancer. This includes designing and performing experiments, as well as analyzing data. The position requires the individual to perform independent research as well as participate in team projects. This scientist will also be expected to play a major role in establishing and maintaining external research collaborations.

Send résumés to:

**Gen-Probe Incorporated
Attention: Human Resources Department G98/75
10210 Genetic Center Drive
San Diego, CA 92121
FAX: 619-410-8001**

ASSISTANT COOPERATIVE EXTENSION VEGETABLE SPECIALIST. An 11-month, career-track 100 percent Cooperative Extension position that includes research, outreach, and education. The appointee will be located at the University of California/USDA Research Center in Salinas, and will be an integral part of the University of California, Davis Department of Vegetable Crops. Research and education emphasis will be on economically and environmentally sound soil, nutrient, water, and crop management practices for cool-season vegetable crops in the Central Coast region of California. Direct applications and inquiries to: **Dr. Timothy Hartz, Search Committee Chair, Department of Vegetable Crops, University of California, Davis, CA 95616-8746. Telephone: 530-752-1738; FAX: 530-752-9659; e-mail: hartz@vegmail.ucdavis.edu.** For additional information, see the complete position description on the World Wide Web at website: <http://veghome.ucdavis.edu/positions/CESpecialist.html>.

The University of California is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

ADMINISTRATOR CENTER FOR ADVANCED STUDIES IN THE SPACE LIFE SCIENCES Marine Biological Laboratory

A Life Science Planning and Study Center was established in 1995 under the sponsorship of the National Aeronautics and Space Administration (NASA). The Center organizes activities at the Marine Biological Laboratory (MBL) on a variety of life science areas, with special attention on how gravity and its control impact on biological processes, and how to use variations in gravity to better understand biology.

The Administrator and Center staff coordinate activities working with the Director/CEO of the Marine Biological Laboratory and in cooperation with NASA. The Administrator organizes and coordinates meetings; oversees production of the Center's newsletter, electronic, and other publications; and establishes linkages to the life sciences community.

Requires a Ph.D., M.D., or equivalent experience in the life sciences, including research in biology or medicine. Administrative experience a plus. Review of candidates will begin July 15, 1998. Please send applications or nominations, including curriculum vitae and names of at least three references, to:

**Susan Goux, Director of Human Resources
Marine Biological Laboratory
7 MBL Street
Woods Hole, MA 02543
E-mail: resume@mbi.edu**

An Equal Opportunity/Affirmative Action Employer/Non-smoking workplace.

SCIENTISTS/ENGINEERS

Scientific Learning Corporation (website: <http://www.scientificlearning.com/>) is harnessing mechanisms of neural plasticity to overcome cognitive and perceptual disorders, and in doing so is changing the daily lives of affected people. Our mission is to create products that produce scientifically verifiable results. We are seeking experienced Scientists and Engineers who can take ideas from conception to working prototypes. Backgrounds in electrical engineering, computer science, mechanical engineering, neuroinformatics, neuroscience, and/or speech and hearing science are desirable. Interested individuals should send a curriculum vitae or résumé and three references to:

**Scientific Learning Corporation
Attn: Michael Merzenich/Bret Peterson
1995 University Avenue, Suite 400
Berkeley, CA 94707
FAX: 510-665-1279
E-mail: bret@scilearn.com**

Scientific Learning Corporation is an Equal Opportunity Employer.

OPEN EXAMINATION FOR STAFF TOXICOLOGIST

The California Environmental Protection Agency, Department of Pesticide Regulation seeks Staff Toxicologists in the pesticide regulatory program. Incumbents will evaluate toxicology studies and/or conduct risk assessments. Positions exist for individuals with Doctorate degrees in toxicology or a closely related field with at least three years of postdoctoral experience and suitable experience in toxicology. The positions are located in Sacramento, California. Salary range begins at \$4,994 per month. Comprehensive benefits package. Submit application and résumé to the address below by the final filing date: July 10, 1998. An oral examination is required and will be scheduled soon after the final filing date:

**Department of Pesticide Regulation
Personnel/Examination Unit
1020 N Street, Room 163
Sacramento, CA 95814
Attn: JKS**

For State application and announcement Telephone: **916-445-4162.**

LIFE SCIENTIST

Marlboro College seeks broadly trained Life Scientist for one-year appointment, possibly renewable, to teach undergraduate courses in an interdisciplinary program that ranges from molecular to community levels. Must teach introductory biochemistry but other areas open. Send letter that covers teaching philosophy, curriculum vitae, and names of three references to: **Dean of Faculty, Marlboro College, Marlboro, VT 05344.** Application review begins June 22, 1998. *Equal Opportunity Employer.*

POSITIONS OPEN

CENTER DIRECTOR WESTERN REGIONAL RESEARCH CENTER

Center Director, Western Regional Research Center, Agricultural Research Service, United States Department of Agriculture, Albany, California. To direct diverse research programs to generate new knowledge and technology to ensure an abundance of safe, high-quality, and high-value agricultural commodities, while maintaining or enhancing environmental quality. Position requires background in research and administration to provide intensive scientific knowledge, executive skills, and leadership for effective administration of complex and diverse Center programs.

Announcement No. ARS-SES: 98-1. Closing date: June 19, 1998. Salary range \$99,200 to \$118,400. Contact:

**USDA, ARS, AFM, HRD
Policy Branch
ATTN: Lee Triplett
5601 Sunnyside Avenue
Stop Code 5301
Beltsville, MD 20705-5301
Telephone: 301-504-1434
Website: www.ars.usda.gov**

ARS is an Equal Opportunity Employer.

BIOLOGICAL THERAPY DEVELOPMENT

The Greenebaum Cancer Center of the University of Maryland is interested in expanding its translational research program in biological therapy. We are interested in individuals with experience and expertise in laboratory research in the areas of endothelial cell biology, apoptosis, angiogenesis, and antiangiogenesis, with clinical applications for biological therapy, particularly antiangiogenesis therapy. The Cancer Center and the University have growing and sophisticated programs in molecular genetics, gene therapy, experimental therapeutics, drug development and pharmacology, multiple aspects of drug resistance, and large clinical and laboratory programs dealing with a broad range of oncology. Academic rank, tenure status, and salary commensurate with experience. Interested applicants should submit their curriculum vitae to: **Sanford A. Stass, M.D., Director, Greenebaum Cancer Center, 22 South Greene Street, Room N9E38, Baltimore, MD 21201.** *The University of Maryland, Baltimore, encourages women and minorities to apply and is an Affirmative Action/Equal Employment Opportunity/ADA Employer.*

MODELER, CONSERVATION ECOLOGICAL/FISHERIES THREE PERMANENT POSITIONS National Oceanic Atmospheric Association San Francisco Bay Area

The Tiburon Laboratory of the National Marine Fisheries Service, a National Oceanic Atmospheric Association (NOAA) research facility, invites applications for three positions to develop and implement statistical and simulation models of Pacific salmonid populations. Research emphasis is on threatened and endangered species and their interactions with other populations, fishing, and the environment. Experience in modeling salmonids or other endangered species is desirable. Salary \$49,167 to \$76,007. Announcement W/NMF/980316.BC closes June 30, 1998; for details, Telephone: **206-526-6294; website: <http://www.pfeg.noaa.gov/tib/jobs>.** *U.S. citizenship required. The Department of Commerce is an Equal Opportunity and Affirmative Action Employer.*

BIOTRANSPLANT, INC.

We are seeking an experienced individual to join our efforts in the development of clinically appropriate methods to induce specific immune tolerance to organ grafts, in order to enhance the success of organ transplantation.

SCIENTIST/SENIOR SCIENTIST

Individual should possess a Ph.D. and at least one year of postdoctoral experience in immunology or a related discipline. Research experience should include molecular aspects of cell-to-cell interaction and/or transplantation immunology.

You'll enjoy a professionally stimulating environment and a competitive compensation package. Send your résumé to: **Human Resources, BioTransplant, Inc., Building 75, 3rd Avenue, Charlestown Navy Yard, Charlestown, MA 02129. E-mail: ariane.hodges@biotransplant.com.** *We are an Equal Opportunity/Affirmative Action Employer.*

GLOBAL OPPORTUNITIES

NATIONAL CENTRE FOR CELL SCIENCE, PUNE (An autonomous Institution of the Department of Biotechnology, Government of India)

NCCS is devoted to research and development in modern Biology and Biotechnology. The Centre is looking for various outstanding Scientists in areas of cell-cell communication, signal transduction, neurobiology, developmental biology, cellular physiology, glycobiology, membrane dynamics, etc. Candidates should have published work of high quality. Applicant must possess a doctoral degree or equivalent *and should be an Indian citizen*. For position/designation, salary, and age limit, the applicants are requested to contact at the address given below before applying. Applicant should send a CV along with a summary or research interests and goals as well as arrange to have at least three letters of reference sent to:

Director

**National Centre for Cell Science
Ganeshkhind, Pune-411007
Maharashtra, India
Fax No. 91 (212) 372259
E-mail root@nccs.ernet.in**

Applications should reach us within two months of appearance of this advertisement.



Cadus Pharmaceutical Corporation, a leader in functional genomics, is creating an integrated program of drug discovery. Focusing primarily on G protein-coupled receptors and their related cell signaling pathways, Cadus exploits the similarities between the yeast and human genomes to create proprietary yeast and mammalian cell-based tools of drug discovery. Cadus has openings for motivated individuals in the following areas.

RECEPTOR PHARMACOLOGY & BIOCHEMISTRY

CODE: S-RPB PhD Scientist with a minimum of 2 years post doctoral research experience with a strong background in G-Protein coupled receptors pharmacology and signal transduction, and BS/MS scientist with a minimum 2 year experience and a strong background in receptor binding and second messenger system assays and yeast and/or mammalian cell culture techniques. Qualified individuals will work with a team of people exploring pharmacological and biochemical characterization of the interactions between Receptors, G-proteins and Effectors in transformed yeast and mammalian cells.

MOLECULAR/YEAST BIOLOGY

CODE: S-MYB BS/MS scientists with a minimum of 2 years experience or PhD scientists with a minimum of 3 years postdoctoral research experience in molecular biology for a project expressing mammalian signal transduction proteins in yeast. Background in cellular and molecular biology or biochemistry is required. Experience with yeast and protein analysis is preferred.

DRUG DISCOVERY/CELL BIOLOGY

CODE: S-DD BS/MS scientists with a minimum of 1 year laboratory experience with strong background in molecular biology, mammalian cell culture, and receptor signal transduction research. Previous experience in molecular target-based drug discovery is also desirable. Qualified individuals will work within the drug discovery group exploring cellular signaling pathways and designing/implementing secondary assay systems to analyze potential therapeutics.

GENOMICS

CODE: S-G BS/MS scientists with a minimum of 1 year experience in molecular biology and cloning full length cDNA. Experience in cloning vector construction, isolation of cDNAs from large genomic clones or degenerate PCR methodologies is desirable.

In reward for your dedication, Cadus offers competitive salaries and benefits as well as career opportunities in a stimulating environment. Please send your CV and List of References, indicating job code to: **Cadus Pharmaceutical Corporation, 777 Old Saw Mill River Road, Tarrytown, NY 10591-6705; Email: hr@cadus.com. Check out our website at www.cadus.com.** Cadus is an Equal Opportunity Employer.

CADUS

**PHARMACEUTICAL
CORPORATION**

*...turning the Human Genome Project
into Drug Discovery*

GLOBAL OPPORTUNITIES



Partec, Ltd. — a Jerusalem-based biomedical venture and management group that incorporates emerging life science technologies into biomedical start-up companies — has a number of exciting opportunities in its growing portfolio and is seeking the following:

Portfolio Company Managers

Highly motivated, research-oriented M.D's and/or life sciences Ph.D's to manage the scientific and corporate development of promising start-up biopharmaceutical companies. Responsibilities include: scientific and medical management; communicating between R&D and executive management; and shaping corporate and intellectual property development. Previous industry experience preferred but not required. Positions to be based in Israel.

Clinical Trials/Regulatory Affairs Manager

M.D. and/or life science Ph.D. with at least 3 years of experience in managing clinical trials and thorough knowledge of FDA regulatory affairs. Positions to be based in Israel.

Biopharmaceutical Analysts:

Research-oriented M.D's and/or life science Ph.D's wanted for identification and evaluation of novel, promising biopharmaceutical projects. Previous industry experience preferred but not required. Positions to be based in Europe.

Please visit our website at: **www.partec-ltd.com**

Submit résumés to:

Partec Ltd.

Attn: Morris Laster, M.D.

216 Jaffa Road

Jerusalem, Israel

or e-mail to: admin@partec-ltd.com

EUROPEAN OPPORTUNITIES



The University of Hamburg Endowed Professorship in Sustainability and Global Change

The University of Hamburg is introducing a new core program in integrated sustainable development and invites applications for an endowed full professorship in "Sustainability and Global Change." This professorship represents a unique opportunity to address changes in climate and environmental conditions in their interrelatedness with global economic transformations, changing patterns of political regulation, and social and cultural change. It demands a complex conceptualization of the field which takes full account of both the macro and the regional levels in formulating policy and strategies for action.

Employment requirements and conditions:

(in accordance with § 15, Hamburg Universities and Academies Act)

Applicants should be competent in the relevant natural sciences and have an established international reputation in one of the relevant behavioral, social, human, or economic sciences as well as a strong record of interdisciplinarity in their past work. Candidates should also have extensive experience in coordinating international research networking. A demonstrated excellence in teaching is a prerequisite.

The successful candidate will be expected to integrate innovatively work in environmental research already being undertaken in various faculties of the university. She/he will also be expected to participate in the development of the interdisciplinary course program on aspects of sustainability and to participate in that program. The teaching load is 8 hours lectures/seminars per week, per semester.

The appointment is effective from **1st April 1999**. Salary is on the German Federal Employees Scale for a C4 professorship. Inquiries and applications should be addressed to: **the President of the University of Hamburg, Administration - Personnel Department -332.11/12-, Moorweldenstr. 18, D-20148 Hamburg, Federal Republic of Germany**, to be received by **28 August 1998**. Applicants should include a tabular curriculum vitae, a list of publications and full details of their teaching experience to date, together with a written presentation of their concepts for this new core program.

The University of Hamburg hires on the basis of merit and is committed to employment equity. All qualified persons are encouraged to apply.

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE ENZYME BIOTECHNOLOGY

The Process Development Section in the Chemical Technology Division at Oak Ridge National Laboratory (ORNL) has an opening beginning June 1, 1998, for a recent Ph.D. in chemistry/biochemistry or other appropriate degree with interests/experience in enzyme biotechnology to study the production of hydrogen from environmental sources of energy (biomass). The position is for one year, renewable up to three years with competitive benefits and salary based upon qualifications and experience. Interested candidates are invited to e-mail curriculum vitae and brief description of research interests to: **Dr. Jonathan Woodward, e-mail: oop@ornl.gov; Telephone: 423-574-6826.** The ORNL Postdoctoral Research Associates Program is administered jointly by the ORNL Office of University and Science Education and the Oak Ridge Institute for Science and Education (ORISE). This program is open to all qualified U.S. and non-U.S. citizens without regard to race, color, age, religion, sex, national origin, physical or mental disability, or status as a Vietnam-era veteran or disabled veteran.

POSTDOCTORAL POSITION GENE EXPRESSION IN MELANOMA

Position available to investigate molecular changes in gene expression underlying specific features of melanoma progression and metastasis in our new transgenic mouse models with ultraviolet radiation-induced malignant melanoma. A strong background in molecular biology is indispensable; some research experience in cell biology is desirable. Please send curriculum vitae and names of three references to: **Dr. Beatrice Mintz, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, PA 19111. Equal Opportunity Employer.**

RESEARCH ASSOCIATE. An individual is desired with a minimum of three years of experience in behavioral neurophysiology. This person will conduct NIH-funded research projects investigating ethanol and cannabinoid actions on ensemble neuronal activity during locomotion, reward, memory, and timing functions in awake behaving animals. Experience is required in behavioral training, animal surgery, neuron population recording, and use of recording and analysis software.

Reply to: **Dr. D. J. Woodward, Department of Physiology/Pharmacology, Wake Forest University, School of Medicine, Medical Center Drive, Winston-Salem, NC 27157.**

RESEARCH ENTOMOLOGIST (Announcement: Early Alert). The USDA, Forest Service seeks a Research Entomologist (GS-12) for the Wood Products Insect Research Unit, Starkville, Mississippi. Candidates must have knowledge of forest ecology and insect biology and behavior. To receive an announcement packet, send curriculum vitae to: **Dr. Robert L. Doudrick, Southern Institute of Forest Genetics, USDA Forest Service, 23332 Highway 67, Saucier, MS 39574. Telephone: 228-832-2747 for position information. We are an Equal Opportunity Employer.**

POSTDOCTORAL POSITIONS available to study the mechanism of RNA export from the nucleus, and the regulation of nuclear pore complex assembly. Current work focuses on interactions of transport factors Gle1, Gle2, and Kap95 with nucleoporins (*Nature* 383:357, 1996; *JCB* 137:797, 1997; *JCB* 136:1185, 1997). Send curriculum vitae and names of references to: **Dr. Susan Wente, Box 8228, Washington University School of Medicine, 660 South Euclid, St. Louis, MO 63110. E-mail: swente@cellbio.wustl.edu.**

POSTDOCTORAL FELLOWSHIP/RESEARCH ASSOCIATE position is available immediately for a recent Ph.D. in biochemistry/pharmacology/cell biology to study signal transduction through G protein-coupled receptors in normal and disease states. Send curriculum vitae with references to: **Madan M. Kwatra, Ph.D., Departments of Anesthesiology and Pharmacology, Duke University Medical Center, P.O. Box 3094, Durham, NC 27710. E-mail: kwatr001@mc.duke.edu; FAX: 919-681-8089.**

Nuclear Cardiology at Columbia University is seeking applicants with a Ph.D. and experience in heart isolation and metabolism studies for **ASSOCIATE RESEARCH SCIENTIST** positions. Send a curriculum vitae and the names of three references to: **Steven Bergmann, M.D., Ph.D., Director, Nuclear Cardiology, Columbia University, Box 93, 630 West 168th Street, New York, NY 10032. We take Affirmative Action toward Equal Opportunity.**

POSITIONS OPEN

POSTDOCTORAL POSITION available to study mechanisms of catalysis and long-range electron transfer by redox enzymes. Experience in steady-state and transient kinetics and molecular biology desirable. Send curriculum vitae and names of three references to: **Dr. Victor L. Davidson, Department of Biochemistry, University of Mississippi Medical Center, Jackson, MS 39216-4505. Equal Opportunity Employer. Minorities/Females/Disabled/Veterans.**

POSTDOCTORAL POSITION DEPARTMENT OF NEUROBIOLOGY THE SCRIPPS RESEARCH INSTITUTE La Jolla, California

Postdoctoral position available to study the mechanisms that control the expression of cell adhesion molecules during neural development. Projects will focus primarily on identifying CAM gene regulatory elements and characterizing transcription factor families that respond to differentiation factors of the bone morphogenetic protein family. For examples of our experimental approach, see: *JBC* 270:21291, *PNAS* 93:1846, *PNAS* 94:2632, *JCB* 138:1343. The successful candidate will be a highly skilled Molecular Biologist or Biochemist whose primary scholarly motivation is to understand how the interplay of molecular components guides formation of the mammalian nervous system. Experience with cell culture, isolation of transcription factors, and/or transgenic mouse technology is highly desirable; however, all strong candidates will be considered.

Please submit a curriculum vitae, including a statement of research experience/interests, and arrange to have three letters of reference sent to: **Frederick S. Jones, Ph.D., The Scripps Research Institute, Department of Neurobiology, 10550 North Torrey Pines Road, SBR-14, La Jolla, CA 92037. E-mail: fjones@scripps.edu; website: www.scripps.edu. TSRI is an Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITION TBP AND TAF STRUCTURE-FUNCTION STUDIES

A Postdoctoral position is available to examine the role of the TATA-Box Binding Protein TBP and its associated factors (TAFs) in transcription initiation complex formation in *Saccharomyces cerevisiae* (see: *J. Biol. Chem.* 269:28335; 272:9436; *Proc. Nat. Acad. Sci. USA* 92:8224; *Biochemistry* 34:8005; *Mol. Cell Biol.* 17:3081). We are currently using a combination of biochemical, genetic, and biophysical methods to study the interactions of these proteins with TBP, DNA, and other transcription factors. Interested parties should send a curriculum vitae and arrange to have three letters of reference sent directly to: **Dr. Tony Weil, Department of Molecular Physiology and Biophysics, Vanderbilt University, School of Medicine, Nashville, TN 37232-0615. FAX: 615-322-7236.**

Vanderbilt University is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL/RESEARCH ASSOCIATE position for experimental therapy projects to study (1) radioimmunoconjugates and chemotherapeutics in animal models, (2) vascular physiology in tumor and normal tissues, and (3) application of immunodetection and immunotherapy to nontumor pathophysiological conditions. Ph.D. with zero to four years of experience and knowledge in several of the following areas: immunology, physiology, cell/molecular biology, and/or histochemistry/pathology. Must have good verbal/written English skills. Starting salary is \$23,000 to \$28,000. You will be given approximately 25 percent time to work on your own independent projects and funding opportunities with the possibility of future faculty opportunity. Position available immediately. Send curriculum vitae and three references to: **Dr. Rosalyn Blumenthal, Director, Tumor Biology, Garden State Cancer Center, 520 Belleville Avenue, Belleville, NJ 07109. FAX: 973-844-7020. Equal Opportunity Employer.**

Carnegie Mellon seeks a **POSTDOCTORAL AND RESEARCH STAFF** for studies of health, safety, and environmental regulation. Require strong background in natural and/or social science and policy experience. Send résumé, recent papers, and references to: **Granger Morgan, Engineering and Public Policy, Carnegie Mellon, Pittsburgh, PA 15213.**

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE MAMMALIAN GERM-CELL BIOLOGY

The Mammalian Genetics and Development Section of the Life Sciences Division at Oak Ridge National Laboratory is seeking a Postdoctoral Research Associate with an interest in mammalian germ-cell biology, particularly in the biology of exposure of germ cells to mutagens. The program will combine mouse genetics and mutagenesis, assays for gene expression, and investigation of the importance of the individual's genotype in the development of exposure phenotypes. The employment period will be for one year with possible renewal for an additional year. Send an updated curriculum vitae and names and telephone numbers of three references to: **Dr. Dabney Johnson, Oak Ridge National Laboratory, Life Sciences Division, Building 9210, Mail Stop 8077, P.O. Box 2009, Oak Ridge, TN 37831-8077. Telephone: 423-574-0953; e-mail: johnsondk@ornl.gov.** This program is open to all qualified U.S. and non-U.S. citizens without regard to race, color, age, religion, sex, national origin, physical or mental disability, or status as a Vietnam-era or disabled veteran.

POSTDOCTORAL POSITION

Seeking a Molecular Biologist with experience in studying gene expression systems to join dynamic research team engaged in studying HIV pathogenesis. The position involves investigating the evolution of viral genomes during disease progression and the molecular determinants for lentiviral pathogenicity or attenuation. A background in virology and/or general immunology highly desirable.

Send curriculum vitae and names of three references to:

**Dr. Ruth Ruprecht
Dana-Farber Cancer Institute
One Jimmy Fund Way
Boston, MA 02115-6084**

**E-mail: ruth_ruprecht@dfci.harvard.edu
Telephone: 617-632-3719
FAX: 617-632-3112**

Equal Opportunity Employer.

PREDOCTORAL AND POSTDOCTORAL POSITIONS IN INTERDISCIPLINARY PROGRAM

Positions on an NIH-funded Interdisciplinary Training Grant are available to individuals interested in intracellular signaling, gene transcription, mitogenesis, lipid metabolism, and several other biological processes involved in a variety of cardiovascular diseases. Visit our website: <http://www.utm.edu/pharmacology/training> for details. Applicants must be U.S. citizens or permanent residents. Please send résumé with names of three references to: **Dr. Tarun B. Patel, Department of Pharmacology, University of Tennessee, Memphis, 874 Union Avenue, Memphis, TN 38163. E-mail: tpatel@physiol.utm.edu; FAX: 901-448-7300. University of Tennessee is an Equal Employment Opportunity/Affirmative Action/Title IX/Section 504/ADA Employer. Minorities and women are especially encouraged to apply.**

POSTDOCTORAL POSITION FUNCTIONAL MORPHOLOGY OF ARTHROPODS

A two-year Postdoctoral position is available immediately to conduct comparative electromyographic and kinematic studies of locomotion in arthropods. Preference will be given to applicants with a recent Ph.D. in comparative or experimental morphology or physiology. Applicants should send their curriculum vitae and the names and telephone numbers of three references to: **Dr. Jeffrey W. Shultz, Department of Entomology, University of Maryland, College Park, MD 20142. E-mail: js314@umail.umd.edu; FAX: 301-314-9290. The University of Maryland is an Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL RESEARCH POSITION available in tissue engineering. Areas of study include molecular and cellular biology, immunology, biochemistry of extracellular matrix biomaterials and synthetic biomaterials, using *in vivo* and *in vitro* assay systems. Informal inquiries may be made via e-mail: badylak@ecn.purdue.edu. Applicants should submit a letter of interest, curriculum vitae, and two letters of reference to: **Dr. Stephen F. Badylak, Hillenbrand Biomedical Engineering Center, Potter Building, Room 204, Purdue University, West Lafayette, IN 47904-1296. Purdue University is an Affirmative Action/Equal Employment Opportunity Employer.**

JANSSEN

RESEARCH FOUNDATION

The Janssen Research Foundation is a global R&D organization, employing more than 1,000 of its 2,900 scientific researchers and specialized technicians at its headquarters in Beerse, Belgium. They have made Janssen the most innovative pharmaceutical company in the world. Janssen is a member of the Johnson & Johnson family of companies. The company, which has set very high qualitative and ethical standards and has great ambitions for the future, is currently searching for a (m/f):

DIRECTOR OF PHARMACOGENETICS

Job description:

The Director of Pharmacogenetics will investigate the influence and applications of human genetic variation in clinical drug development, efficacy and safety, both at the pharmacokinetics and pharmacodynamics level. He/she will initially lead a group of 2 experienced Ph.D.'s and 3 skilled technicians, working in state-of-the-art equipped laboratories. He/she will expand this unit, working intensively with other departments such as clinical development, clinical pharmacokinetics, biostatistics, pharmacovigilance and development planning.

Professional requirements:

- ☐ Ph.D. in molecular biology, molecular genetics, medical biology, pharmacology, biochemistry or M.D. with similar research training;
- ☐ at least 10 years of post-doctoral experience in biomedical research, of which some years in industry;
- ☐ strong medical background, preferably some experience in clinical development in a pharmaceutical or biotech company;
- ☐ technical experience in one or more of the following areas:
 - pharmacokinetics and pharmacodynamics
 - genetics of complex disorders
 - detection and analysis of DNA polymorphisms and mutation screening
 - statistical analysis in biomedical research;
- ☐ aware of all ethical issues relevant to the application of DNA technology in clinical trials.

Personal requirements:

- ☐ leader with management skills: the Director of Pharmacogenetics will manage the pharmacogenetics laboratory, using updated and state-of-the-art genotyping technology according to GXP standards. The laboratory will conduct its own research projects and will apply current technologies/knowledge to patient material obtained from clinical trials;
- ☐ strong communicator and project defender: the Director of Pharmacogenetics will develop new research programs as an equal partner in collaboration with other departments within the Janssen Research Foundation, especially clinical research and development. He/she will also negotiate and communicate directly with academic and industrial collaborators;
- ☐ dynamic personality with profound research interest: the Director of Pharmacogenetics will work in a highly competitive and continuously changing environment. He/she should keep in touch with the newest scientific developments, in order to adapt research programs quickly.

Applications in the form of a resumé with the name, the address and the telephone number of at least two references should be sent to Janssen Research Foundation, Personnel Department, attn. Rudi Van den Bergh, Turnhoutseweg 30, B-2340 Beerse, Belgium. Fax: 32/14/60.61.25. Please state reference number 98/9999 S.

POSITIONS OPEN

CELLULAR AND MOLECULAR IMMUNOLOGISTS

The Laboratory of Intracellular Parasites, National Institutes of Health is recruiting individuals for one or more **POSTDOCTORAL POSITIONS** to study comparative mucosal immunology with emphasis on lymphocyte trafficking, site-specific immune specializations, and the development of vaccines to mucosal pathogens using a murine model of *Chlamydia trachomatis*. Stipend commensurate with credentials and research experience.

Qualified and interested candidates should send curriculum vitae and three letters of reference. For more information regarding these positions, contact:

Harlan Caldwell, Ph.D.
Laboratory of Intracellular Parasites
Rocky Mountain Laboratories, NIH, NIAID
903 South 4th Street, Hamilton, MT 58940
Telephone: 406-363-9272
FAX: 406-363-9380
E-mail: hcaldwell@atlas.niaid.nih.gov

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POSTDOCTORAL RESEARCH ASSOCIATE RECEPTOR BIOLOGY LABORATORY Department of Physiology and Biophysics Mayo Foundation, Rochester, Minnesota

Position available studying structure-function relationships of nicotinic acetylcholine receptors. Approaches include site-directed mutagenesis; receptor expression in mammalian, insect, or yeast cell systems; biochemical studies of expressed receptors; and single channel recording and kinetic analysis. Seeking candidates experienced in protein chemistry, molecular biology, or electrophysiology. Please send description of research interests and curriculum vitae to: Dr. Steven M. Sine, Mayo Clinic, 200 First Street S.W., Rochester, MN 55905.

POSTDOCTORAL POSITION available immediately to study immunobacterial pathogenesis. Project involves the study of macrophage/neutrophil/endothelial cell activation by bacterial lipoprotein (LP). The receptor(s) and signaling pathways involved in LP-activation will be investigated. Experience in one of these areas is desirable. Send curriculum vitae and three letters of reference to: Dr. G. R. Klimpel, Department of Microbiology/Immunology, University of Texas Medical Branch, Galveston, TX 77555-1070. FAX: 409-747-6869; e-mail: gklimpel@utmb.edu.

UTMB hires only persons authorized to work in the United States. UTMB is an Affirmative Action/Equal Opportunity Employer. Minority/Females/Disabled/Veterans.

POSTDOCTORAL POSITION available to study the molecular mechanism of glucocorticoid receptor gene expression. This position requires experience in Western and Northern blotting techniques, and experience in recombinant DNA technology, promoter analysis, and reporter gene assays. Send curriculum vitae and the names, addresses, and telephone numbers of three references to: Wayne V. Vedeckis, Ph.D., Department of Biochemistry and Molecular Biology, Louisiana State University Medical Center, 1901 Perdido Street, New Orleans, LA 70112. Telephone: 504-568-8175; FAX: 504-568-6997; e-mail: wvedec@lsu.edu. LSU is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL FELLOW

Immediate position available to Postdoctoral Fellow to study regulation of LDL and scavenger receptor gene expression. Experience in molecular biology, including DNA-protein interactions and cell culture is desirable. Candidate will join a research group investigating immune-mediated mechanisms of atherosclerosis. Please send curriculum vitae and three references to: Maria Lopes-Virella, M.D., Ph.D., Ralph H. Johnson VA Medical Center (151), 109 Bee Street, Charleston, SC 29403. FAX: 803-953-6432.

EAST TENNESSEE STATE UNIVERSITY

POSTDOCTORAL POSITION available immediately for **ELECTROPHYSIOLOGIST** to study effects of neuropeptides on cardiac ganglia. Applicants must have experience with intracellular recording techniques. Position funded by NIH grant. Send curriculum vitae and names of three references to: Dr. Donald B. Hoover, Department of Pharmacology, East Tennessee State University, Johnson City, TN 37614. E-mail: hoover@etsu.edu. Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN



STANFORD UNIVERSITY SCHOOL OF MEDICINE

POSTDOCTORAL POSITION available immediately to study Tetraspanins, a family of eukaryotic cell surface proteins important in cell proliferation, adhesion, motility, and immune functions. This position is NIH-sponsored. Applicants must have a Ph.D. and demonstrated experience in immunology and molecular biology. Preference will be given to U.S. citizens and permanent residents. Send application, including names of three references, to: Dr. Shoshana Levy, Department of Medicine, Division of Oncology, Stanford University School of Medicine, Stanford, CA 94305. E-mail: levy@cmgm.stanford.edu. Equal Employment Opportunity.

POSTDOCTORAL POSITIONS at Vanderbilt University are available immediately. Seeking two Scientists to join dynamic research division studying human immune responses to respiratory viruses. One position involves cloning and expressing antibody genes from human neonates for the purposes of defining molecular mechanisms responsible for the development of virus-specific B cell repertoires. The other involves analysis of the interactions of viruses, human epithelial cells, and immune effectors in the induction of mucosal immune responses. Experience in molecular biology and cellular viral immunology is preferred. Send curriculum vitae, copies of relevant publications, and three references to: James Crowe, M.D., Pediatric Infectious Diseases, Vanderbilt University Medical Center, D-7235 MCN, 1161 21st Avenue South, Nashville, TN 37232-2581. FAX: 615-343-9723.

POSTDOCTORAL FELLOW POSITION

The Laboratory of Microbial Structure and Function, NIAID, NIH seeks a Postdoctoral Fellow to conduct research on *Borrelia burgdorferi*, the causative agent of Lyme disease, in the laboratory of Dr. P. Rosa. The broad research objective is to elucidate the molecular mechanisms of adaptation and variation in *B. burgdorferi* and to understand their roles in the infectious cycle. Interested candidates must have a doctoral degree; training in molecular biology, biochemistry, or genetics; and should apply directly by submitting a curriculum vitae to: Dr. Rosa, Rocky Mountain Laboratories, 903 South 4th Street, Hamilton, MT 59840. E-mail: patricia_rosa@nih.gov.

POSTDOCTORAL POSITION available to study protein-protein interactions that contribute to transcriptional silencing during *Drosophila* development. The NIH-funded project entails the identification and characterization of interactions involving Polycomb-group proteins, and the roles of specific interactions in the regulation of target genes (*MCB* 18:2825, 1998). Experience in protein biochemistry and/or molecular cloning is required. Send curriculum vitae and names of three references to: Dr. Richard Jones, Department of Biological Sciences, Fondren Science Building, Southern Methodist University, Dallas, TX 75275-0376. E-mail: rjones@mail.smu.edu. Affirmative Action/Equal Opportunity Employer.

A **POSTDOCTORAL POSITION** available in protein crystallography to study the three-dimensional structure of cell surface receptor molecules and their complexes with ligands. Experience in biochemistry and protein crystallography is preferred. The laboratory has two R-axis detector systems, a well-equipped protein expression and purification unit. Applicant should send curriculum vitae and three letters of recommendation to: Dr. Peter Sun, National Institute of Allergy and Infectious Diseases, NIH, 12441 Parklawn Drive, Rockville, MD 20852. Telephone: 301-496-3792; e-mail: sun@magenta.niaid.nih.gov. NIH is an Equal Opportunity Employer.

POSTDOCTORAL FELLOWSHIP. A position is available to participate in a research program to study the role of inflammatory mediators in the pathogenesis of neonatal brain injury. Preference will be given to candidates with experience in neuroanatomy, molecular biology, and small animal surgery. To apply please send curriculum vitae, the names of three references, and a summary of your interests and previous laboratory experience to: Faye Silverstein, M.D., University of Michigan, 8301 MSRB3, Ann Arbor, MI 48109-0646.

POSITIONS OPEN

POSTDOCTORAL POSITION AQUATIC ECOLOGY OR GEOCHEMISTRY

The U.S. Geological Survey is seeking candidates for a Postdoctoral Associate (GS-1315-11 Hydrologist) in Menlo Park, California to direct a study of the Sacramento-San Joaquin River Delta. Objective of the study is to compare the quantity, quality, and utilization pathways of the organic matter that supports secondary production in different aquatic habitats. Applicants should be U.S. citizens with: (1) broad training in aquatic science (emphasis on biology of lower trophic levels or organic geochemistry); (2) experience in field sampling, analysis of complex data sets, and skills with diverse instrumentation; and (3) abilities to direct a focused project and contribute as a member of a large team. To apply, contact: The Office of Personnel Management, Telephone: 206-553-0888; website: <http://www.usajobs.opm.gov> (Vacancy #FW0604). For further information contact: Dr. James Cloern, e-mail: jecloern@usgs.gov. The U.S. Geological Survey is an Equal Employment Opportunity Employer.

POSTDOCTORAL POSITION DEPARTMENT OF NEUROBIOLOGY THE SCRIPPS RESEARCH INSTITUTE La Jolla, California

Postdoctoral position available to study mechanisms of translational regulation in mRNAs that contain sequence complementarity to rRNA. Studies will focus on the direct interactions of mRNAs with ribosomes, and on the effects of these interactions on gene expression. The position is available immediately.

Please submit a curriculum vitae, including a statement of research experience/interests, and arrange to have three letters of reference to be sent to: Vincent P. Mauro, Ph.D., The Scripps Research Institute, Department of Neurobiology, 10550 North Torrey Pines Road, SBR-14, La Jolla, CA 92037. Website: www.scripps.edu. TSRI is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION available for a biochemical engineering, microbiology, or biochemistry Ph.D. to study the effects of large-scale bioreactor environments on protein glycosylation in insect cell cultures. Background in cell culture, bioreactor operation, and glycochemistry/glycochemistry desirable. Ability to work across the disciplines of biochemical engineering and pharmaceutical chemistry essential. Salary will be \$28,000 plus a generous fringe benefits package. Please send curriculum vitae and two letters of reference to: Professor David W. Murrhammer, Department of Chemical and Biochemical Engineering, University of Iowa, Iowa City, IA 52242. The University of Iowa is an Equal Opportunity Employer/Affirmative Action Employer. Women and minority candidates are encouraged to apply.

POSTDOCTORAL POSITIONS are available immediately to study mechanisms of immunoregulation in autoimmunity. Current studies focus on identifying cellular and molecular mechanisms controlling the outgrowth of pathogenic CD4+ T cells in autoimmune disease animal models and human disease. Applicants with a solid background in molecular biology and/or cellular immunology are desired. Please send letter of interest, curriculum vitae, and names of two references to: Dr. Leonard Chess, Department of Medicine, College of Physicians and Surgeons, Columbia University, PH 8E Suite 101, 630 West 168th Street, New York, NY 10032. Columbia University takes Affirmative Action toward Equal Employment Opportunity.

POSTDOCTORAL POSITION available immediately to study the regulation of calcium mobilization by protein kinases. The research involves the use of fluorescent calcium indicator dyes and the patch clamp technique (*PNAS* 95:1613-1617, 1998). Applicants should preferably have experience in these areas. Send curriculum vitae and contact information for three references to: Dr. Alan Fein, Department of Physiology, University of Connecticut Health Center, 263 Farmington Avenue, Farmington, CT 06030-3505. FAX: 860-679-1269; e-mail: afein@neuron.uchc.edu.

POSTDOCTORAL POSITION is available immediately for work on the bacterial NADH dehydrogenase. Experience with gene manipulation is preferred. Send curriculum vitae and names of three references to: Takao Yagi, SBR-15, The Scripps Research Institute, La Jolla, CA 92037. E-mail: yagi@scripps.edu. See website: <http://www.scripps.edu/biochem/yagi/> for details.

POSITIONS OPEN

POSITION AVAILABLE IN OPTICAL IMAGING IN CELLULAR AND SYSTEMS NEUROPHYSIOLOGY

The Wilson group, at the University of California, San Diego, Department of Chemistry and Biochemistry, has a **POSTDOCTORAL or RESEARCH FACULTY**-level opening available for an accomplished Physiologist who wishes to help develop and use advanced optical techniques to observe and understand neuronal function at the cellular and systems levels, in a collaboration among ultrafast optical and neuroscience groups. Example projects include high-speed functional imaging with variety of nonlinear multiphoton techniques; interferometric imaging of transmembrane potential via refractive changes; second- and third-harmonic generation as a contrast mechanism for optical sectioning; photostimulation and manipulation by ultrafast pulses; and laser Doppler imaging of cortical blood flow.

For more information about this position, or to receive application process information, visit our website: <http://www-wilson.ucsd.edu>; e-mail: wjgobops@ucsd.edu. Positions commensurate with experience and qualifications, with salaries based on UC pay scales. *Affirmative Action/Equal Opportunity Employer.*

PHYSICAL CHEMISTRY, BIOPHYSICS, AND PHYSICS EXPERIMENTALISTS AND THEORISTS POSTDOCTORAL AND RESEARCH FACULTY

The Wilson group, at the University of California, San Diego, Department of Chemistry and Biochemistry, has positions available for exceptionally talented Scientists in the following areas: ultrafast X-ray diffraction and absorption applied to chemical and biochemical dynamics and function, dynamics of biomolecular and biological processes (including interneuronal communication and function) imaged using ultrafast microscopy, and theoretical studies related to these areas. For more information about these positions and the group, or to receive application process information, visit our website: <http://www-wilson.ucsd.edu> or e-mail: wjgobops@ucsd.edu. Positions commensurate with experience and qualifications, with salaries based on University of California pay scales.

Affirmative Action/Equal Opportunity Employer.

Several plant molecular biology **POSTDOCTORAL RESEARCH** positions are available after October 1, 1998. Specific research areas will include development of transgenic plant strains for foreign protein production as well as isolation and characterization of novel plant genetic regulatory elements. On the basis of individual performance these positions may become full staff positions. Applicants should have documented skills in plant physiology, plant molecular biology, and biochemical techniques. Please send a curriculum vitae, brief statement of research experience, and the names of at least three references to: **Dr. Brian S. Hooker, Bioprocessing Group, Environmental Technology Division, Pacific Northwest National Laboratory, Richland, WA 99352.** Telephone: 509-375-4420; FAX: 509-372-4660; e-mail: brian.hooker@pnl.gov.

The National Eye Institute, National Institutes of Health, has a **POSTDOCTORAL POSITION** available for the study of glaucoma using molecular biology approaches. A background in molecular/cellular/developmental biology is desirable. *Applicants must be U.S. citizens or permanent residents.* Applicants must have less than five years of postdoctoral experience. Starting salary ranges from \$27,500 to \$38,000 per year depending upon experience. Please send curriculum vitae, bibliography, and names of three references to: **Dr. Stanislav Tomarev, Laboratory of Molecular and Developmental Biology, Building 6, Room 2A04, MSC-2730, Bethesda, MD 20892-2730.** Telephone: 301-496-2764; FAX: 301-402-0781; e-mail: tomarev@helix.nih.gov.

NIH is an Equal Opportunity Employer.

POSTDOCTORAL POSITIONS available to study cellular immune response against *Toxoplasma gondii*. Previous background in immunology required. These are NIH-funded positions for at least three years. Send curriculum vitae and three letters of references to:

**Imtiaz Khan, Ph.D.
Dartmouth Medical School
Department of Medicine
HB 7506**

**One Medical Center Drive
Lebanon, NH 03756**

E-mail: imtiaz.khan@dartmouth.edu

EUROPEAN OPPORTUNITIES



UNIVERSITY OF
REGENSBURG



POSTDOCTORAL AND TECHNICIAN POSITIONS VOLKSWAGEN-GROUP

**Molecular and Cellular Biology of Neuronal Stem
and Precursor Cells**

Two Postdoctoral and two Technician positions are available in the neurogenesis program of the Volkswagen-Group at the University of Regensburg. Presently the University of Regensburg is developing a strong neuroscience program with focus on neurogenesis in the adult brain. Candidates should have a Ph.D. degree or equivalent (for Postdoctoral positions) and a substantial background in molecular and cell biology. Applicants should send a curriculum vitae, relevant reprints, and at least two letters of recommendation to: **Dr. Ludwig Aigner, Department of Neurology, Universitätsstrasse 84, University of Regensburg, Regensburg D-93053 Germany.** Telephone: +49-941-941-3340; FAX: +49-941-941-3005; e-mail: ludwig_aigner@hotmail.com, or georg.kuhn@klimik.uni-regensburg.de.

MEETINGS

FIRST INTERNATIONAL MEETING ON THE GENE THERAPY OF ARTHRITIS AND RELATED DISORDERS December 2 and 3, 1998

Natcher Conference Center, National Institutes of Health, Bethesda, Maryland 20892 USA.

For further information contact:

**Dr. C. H. Evans
University of Pittsburgh School of Medicine
200 Lothrop Street
Ferguson Laboratory
Room C-313 Presbyterian-University Hospital
Pittsburgh, PA 15213
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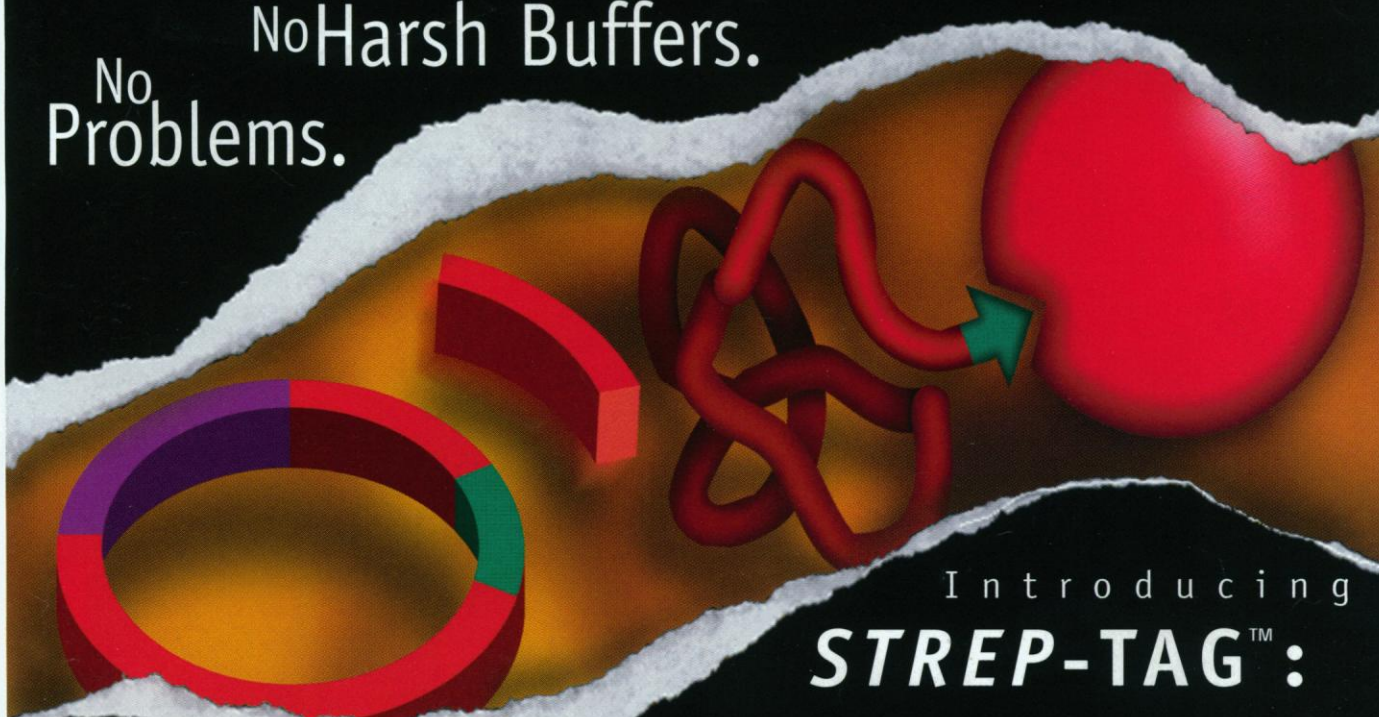
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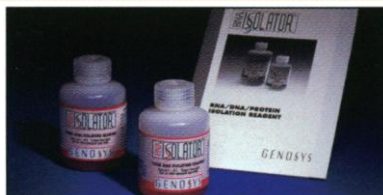
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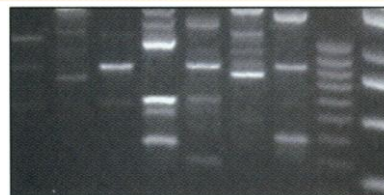
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